AMERICAN ANNALS OF THE DEAF

Official Organ

Conference of Executives of American Schools for the Deaf
Convention of American Instructors of the Deaf

Edited by

IRVING S. FUSFELD

Under the Direction of

PERCIVAL HALL, of the District of Columbia, 1939
FRANK M. DRIGGS, of Utah, *ex officio*
MADISON J. LEE, of Kentucky, 1939
ELWOOD A. STEVENSON, of California, 1945
IGNATIUS BJORLEE, of Maryland, 1942
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CLARENCE J. SETTLES, of Florida, 1945

Executive Committee of the Conference

MAY
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VOL. 82 MAY, 1937 No. 3

AMERICAN ANNALS OF THE DEAF

Provisional Program for the Thirtieth Meeting of the Convention

THE TENTATIVE program for the Thirtieth Meeting of the Convention of American Instructors of the Deaf, to be held at Teachers College, Columbia University, New York City, June 20 to 25 inclusive, is ready for announcement.

In addition to the addresses, papers, and round-table discussions, a major feature of the program will consist of the section on Practica or Demonstrations of Schoolroom Work. These demonstrations will be conducted by noted educators of the deaf and will be open to all members of the Convention. Members wishing to obtain college credits in this field must register and make formal written reports to Dr. Harris Taylor who is in charge of all Practica and Demonstrations. This work will continue during the convention week, from 8:30 to 11:30 each morning.

In addition to the scheduled discussions, round-table leaders will designate further discussion meetings as the particular subjects may warrant. A number of the section programs are still in process of organization; these will include consideration of rhythm work, social and character education, nursery schools, curriculum making, and supervision. Outstanding educators in each of these fields will be secured.

HARRIS TAYLOR,
Chairman of the Program Committee

CONVENTION PROGRAM

Sunday, June 20, 1937

1:00-10:00 P.M. Registration and Information desks open, Horace Mann Auditorium.

8:00-10:00 P.M. Opening Session, Dr. Harris Taylor, presiding.
Invocation.
Addresses of Welcome.
Hon. Fiorello H. La Guardia, mayor of the City of New York.
Dr. Harold G. Campbell, superintendent of schools, City of New York.
Dr. William F. Russell, dean of Teachers College.
Responses to Addresses of Welcome.
Dr. Ignatius Bjorlee, vice president of the Convention.
Others.
Announcements, and Appointments of Committees.

Monday, June 21, 1937

8:30-9:30 A.M. Demonstrations.
Tadoma Method in Speech, Miss Sophia K. Alcorn, critic, Detroit Day-School.
Language for Older Pupils, Miss Mildred A. Groht, principal in the Lexington School.
Straight Language for the Deaf, Miss Edith Fitzgerald, supervising teacher of language, Texas School.
9:30-10:30 A.M. Demonstrations.
Elementary Language, Speech and Lip-Reading, Mrs. Rachel D. Davies, experimental class, New Jersey School.
Lip-Reading for Older Pupils, Miss Dorothy M. Morris, Clarke School.
Systematic Language Work, Miss Gertrude W. Croker, Public School 47, New York City.
Dancing as Related to Rhythm Work, Miss Nora Leddy, St. Joseph's School.
10:30-11:30 A.M. Demonstrations.
Speech, Miss Jeannette J. Christmas, former principal of the intermediate department, Pennsylvania School.
Silent Reading, Miss Josephine Bennett, Lexington School.
Acoustic Training, Miss Mary E. Numbers, teacher-in-charge, middle school, Clarke School.
Voice and Hearing Clinics of the New Jersey School, Dr. Kenneth Braly.
8:30-10:30 A.M. Vocational Section, General Meeting, Mr. Tom L. Anderson, Iowa School, *leader.*
11:00-11:30 A.M. Vocational Section, Group Meetings.
Instructors of boys.
Instructors of girls.
10:30-11:30 A.M. Section on Development of Speech and

Lip-Reading, Mrs. Edna Long Wolf, California School, *leader.*

Paper, *Voice and Speech of the Deaf,* Dr. C. V. Hudgins, Clarke School.

11:30 A.M.-12:30 P.M. General Session.

Address, Dr. Charles H. Johnson, former commissioner of Social Welfare, State of New York.

12:30 P.M. Lunch.

2:15-5:15 P.M. Section on Supervision, Miss Margaret Bodycomb, acting superintendent, Pennsylvania School, *leader.*

Lecture, *Recent Developments in Testing with the Deaf,* Dr. Rudolf Pintner, Teachers College.

Paper, *Admission to Gallaudet College,* Dr. Percival Hall.

Round Table, *The Training of Teachers,* Dr. Merle E. Frampton, Teachers College, presiding.

Other Round Tables as arranged by the leader.

2:15-4:15 P.M. Round Tables, Vocational Training and Art.

6:00 P.M. Dinner. L. P. F.

Tuesday, June 22, 1937

8:30-9:30 A.M. Demonstrations.

Elementary Language, Speech and Lip-Reading, Mrs. Davies.

Silent Reading, Miss Bennett.

Lip-Reading for Older Pupils, Miss Morris.

9:30-10:30 A.M. Demonstrations.

Speech, Miss Christmas.

Straight Language for the Deaf, Miss Fitzgerald.

Acoustic Training, Miss Numbers.

Rhythm Work, Miss Margaret S. Kent, Maryland School.

10:30-11:30 A.M. Demonstrations.

Tadoma Method in Speech, Miss Alcorn.

Language for Older Pupils, Miss Groht.

Systematic Language Work, Miss Croker.

Voice and Hearing Clinics of the New Jersey School, Dr. Braly.

8:30 A.M.-12:30 P.M. Vocational Section.

Instructors of boys, Visit of Inspection to New York School.

Instructors of girls, Visit of Inspection to Lexington School.

Luncheon for Vocational Principals.

10:30-11:30 A.M. Section on Subject Matter, Mr. Charles E. MacDonald, principal of the British Columbia School, *leader.*

Round Table, *The High School for the Deaf,* Mr. T. C. Forrester, superintendent of the Rochester School, presiding.

11:30 A.M.-12:30 P.M. General Session.

Address, Dr. William F. Russell, dean of Teachers College.

12:30 P.M. Lunch.

2:15-3:15 P.M. Section on Health and Physical Education, Supt. B. W. Driggs, North Dakota School, *leader.*

Lecture, *Eye Hygiene of Tomorrow,* Dr. Hugh Grant Rowell, Teachers College.

3:15-5:15 P.M. Section on Supervision.

Paper, *Maladjustment and Retardation of Deaf Children,* Miss D. Frances Kauffman, acting principal, Public School 47, Manhattan.

Round Table, *The New York Plan,* Mr. Joseph J. Endres, New York State Education Department, presiding.

1. *Affecting the State,* Mr. Endres.
2. *Affecting the Schools.*
   a) *The New York School,* Supt. V. O. Skyberg.
   b) *The Lexington School,* Supt. C. D. O'Connor.
   c) *The St. Joseph's School,* Dr. Hanna Miller.

7:00 P.M. Heads of Schools entertained by Supt. and Mrs. V. O. Skyberg at the New York School.

Wednesday, June 23, 1937

8:30-9:30 A.M. Demonstrations.

Speech, Miss Christmas.

Systematic Language Work, Miss Croker.

Acoustic Training, Miss Numbers.

9:30-10:30 A.M. Demonstrations.

Language for Older Pupils, Miss Groht.

Silent Reading, Miss Bennett.

Tadoma Method in Speech, Miss Alcorn.

10:30-11:30 A.M. Demonstrations.

Straight Language for the Deaf, Miss Fitzgerald.

Elementary Language, Speech and Lip-Reading, Mrs. Davies.

Lip-Reading for Older Pupils, Miss Morris.

8:30-11:30 A.M. Vocational Section.

Visit of Inspection to Vocational High Schools for Boys and Girls, in two groups.

10:30-11:30 A.M. Section on Health and Physical Education.

Paper, *Revues, Pageants and Demonstrations,* Miss Hazel Jack, North Dakota School.

11:30 A.M.-12:30 P.M. Section on the Development of Speech and Lip-Reading.

Lecture, *Speech Development and Correction,* Dr. Elizabeth D. McDowell, Teachers College.
12:30 P.M. Lunch.
2:15-5:15 P.M. Vocational Section.
Lecture by specialist in vocational field.
Round Tables.
3:15-4:15 P.M. Section on Subject Matter.
Lecture, *Curriculum Making,* by a leader in the field.
Paper, *Language,* Miss Josephine F. Quinn, principal in the Minnesota School.
2:15-5:15 P.M. Meeting of the Conference of Executives of American Schools for the Deaf, Supt. F. M. Driggs, Utah School, presiding.
Reports of committees.
Discussion.
7:00 P.M. Convention Dinner.

Thursday, June 24, 1937

8:30-9:30 A.M. Demonstrations.
Lip-Reading for Older Girls, Miss Morris.
Language for Older Girls, Miss Groht.
Tadoma Method in Speech, Miss Alcorn.
9:30-10:30 A.M. Demonstrations.
Systematic Language Work, Miss Croker.
Straight Language for the Deaf, Miss Fitzgerald.
Elementary Language, Speech and Lip-Reading, Mrs. Davies.
10:30-11:30 A.M. Demonstrations.
Acoustic Training, Miss Numbers.
Silent Reading, Miss Bennett.
Speech, Miss Christmas.
8:30-11:30 A.M. Vocational Section.
Visit of inspection to Vocational High Schools for Boys and Girls, in two groups.
10:30-11:30 A.M. Section on Health and Physical Education.
Paper, *Health Education,* Miss Edna May Nielson, New Jersey School.
11:30 A.M.-12:30 P.M. General Session.
Address, Dr. Lewis A. Wilson, assistant commissioner for Vocational Education of the State of New York.
12:30 P.M. Lunch.
2:00-3:15 P.M. Business Meeting, American Association to Promote the Teaching of Speech to the Deaf.
2:15-5:15 P.M. Vocational Section.
Lecture by specialist in vocational field.
Round Tables.

3:15-5:15 P.M. Section on Subject Matter.
Lecture, *Silent Reading for the Deaf,* Dr. Ruth Strang, Teachers College.
Round Table, *Reading,* Miss Clara E. Newlee, Parker Practice School, Chicago, presiding.
6:00 P.M. Dinner, Gallaudet College Alumni.

Friday, June 25, 1937

8:30-9:30 A.M. Demonstrations.
Speech, Miss Christmas.
Elementary Language, Speech and Lip-Reading, Mrs. Davies.
Systematic Language Work, Miss Croker.
9:30-10:30 A.M. Demonstrations.
Tadoma Method in Speech, Miss Alcorn.
Acoustic Training, Miss Numbers.
Silent Reading, Miss Bennett.
10:30-11:30 A.M. Demonstrations.
Straight Language for the Deaf, Miss Fitzgerald.
Language for Older Pupils, Miss Groht.
Lip-Reading for Older Pupils, Miss Morris.
9:30-11:30 A.M. Vocational Section.
Symposium, *Social Service.*
1. *The Child in School.*
   Parent and School Relationship.
   Vocational Guidance.
2. *After School.*
   Placement Training and Employment.
   a) By the school.
   b) Other agencies.
      Rehabilitation—Employment or Labor Bureaus.
      Organizations of the deaf.
      Organizations of the hard of hearing.

Round Tables.
10:30-11:30 A.M. Section on Supervision.
Paper, *The Supervising Principal,* Dr. E. A. Gruver, president, American Association to Promote the Teaching of Speech to the Deaf.
Lecture by a leader in the field.
11:30 A.M.-12:30 P.M. Business Meeting of the Convention.
12:30 P.M. Lunch.
2:15-4:15 P.M. Section on Preschool and Kindergarten, Miss May C. Templeman, Central Institute, St. Louis, *leader.*
Lecture by a leader in the field.
Round Table, *Preschool Work at the Clarke School,* Miss Bessie N. Leonard.
Other Round Tables as arranged by the leader.

Special Meeting

of the

Conference of Executives of American Schools for the Deaf

THE meeting of the Convention of American Instructors of the Deaf, which will no doubt be largely attended by heads of schools in the United States and Canada, will furnish an opportunity for a short special meeting of the Conference. This meeting will be held on Wednesday afternoon, June 23, at 2:15, with the whole afternoon reserved for it.

Among the topics which are to be taken up and the speakers are:

Report on Teacher Training and Teacher Certification, Dr. Ignatius Bjorlee.

Report on Statistics of Expenditures of Schools, Mrs. H. T. Poore.

Report on the American Annals of the Deaf, Prof. Irving S. Fusfeld, Editor.

Report on the Work of the Executive Committee, Dr. Percival Hall, Chairman.

Report of Committee on Nomenclature, Mr. Elwood A. Stevenson, Chairman.

Discussion of the Proposed Bill for National Aid in the Education of Handicapped Children.

PERCIVAL HALL
Chairman, Executive Committee

The Responsibility of the Teacher

By YETTA BAGGERMAN
Sulphur, Oklahoma

THE TEACHING profession bestows upon us educators the privilege and the responsibility of guiding and enriching the minds and hearts of the youth entrusted to our care.

What a privilege, and what a trust! There is no greater responsibility in all the land than ours. Let us then ask ourselves squarely, "Are we fulfilling our duty as teachers to the very best of our ability? Have we thought of all it means to be a teacher? Are we, through our own example and devotion to our work, leading these young people in the way that they should go; or is it merely a bread and butter affair with us?"

Let us analyze our responsibility clearly and see just what it includes.

First and foremost in our thought is, perhaps, our duty to carry out the requirements of the curriculum. That is, to teach the subject matter at hand. But *do* we teach; or do we merely assign the prescribed lesson to the pupil and expect him to see the points of interest and work it all out for himself? Are we so well prepared that we can conduct a recitation without the textbook before us and give the lesson such a flavor, by adding interesting facts obtained through our own study and outside reading, that Johnny will devour it whole and ask for more? Or do we send him away from the classroom so bored that he mentally consigns all lessons and books to the wastebasket?

Clearly, it should be one of our chief endeavors to make the lesson interesting. But how? The only answer is by becoming intensely interested ourselves first, for it can not be denied that the interested teacher is also the interesting teacher and the teacher who gets results. To just such degree—and no more—as the teacher is interested, will he be interesting to his pupils. The teacher whose heart is in his work will not fail to arouse even the laziest and dullest of them. Here again, the old adage is true, "Like teacher, like pupil."

The interested teacher, who, as we have said, is also the

interesting teacher, is the one who has his work fully planned for the month, the week and on down even to the hour. He is also the one who has some interesting bit of knowledge to add to the geography, history or other lesson at hand; or it may be a new plan of presenting the subject matter. This makes not only the lesson itself, but also the teacher irresistible.

A way can be found to create interest even in the dullest subjects. It is up to the teacher to find it, and find it he can and will if he is fully determined to live up to the full meaning of the word, "teacher."

Another responsibility of ours is to discipline. Volumes have been written about child behavior and methods of discipline, but after the entire gamut has been gone over, the solution is still to be found in the simple remedy of interest. A teacher who realizes this fact knows that if Johnny plays off sick some days or is bent on mischief in the schoolroom the bait is lacking to lure him into the straight and narrow path, and this teacher will blame himself only and not seek redress in the principal's office.

The teacher should be big enough to discipline and to teach at the same time. That is, so to interest the class that when a pupil needs individual attention the rest of the class will be busy, because they are interested. There will then be no waste of valuable time in idle talk among the pupils or in waiting for the whistle to blow.

We are apt to overlook the fact that when we condemn a slow, a lazy or a fractious pupil as impossible, we are really condemning ourselves along with him. The real teacher will not admit failure. He will use his store of ingenuity to the last atom to find "a way" to reach these types of pupils, and failing in this, he will look within himself for the cause.

Perhaps the highest compliment that can be paid any teacher is, "He has a way of bringing out the best—the finest—that is in a pupil." "A way," yes, that is the secret! To have the tact and the ingenuity to draw out the dull ones, to interest the lazy and the unruly ones, and to lead the bright ones to ever new and unexplored realms of knowledge—this is real teaching.

Still another vital responsibility to be mentioned—and this

should have the highest place in our thoughts—is the duty of developing character. This, of course, involves the religious side of our work. This part of our responsibility should not be only a Sunday affair. We should, by precept and example, show these young people under our care that to be a Christian does not mean merely to attend so many religious services on Sunday, but to have a care as to what we think, do and say on Monday and on the other days of the week as well. In short, our duty is to practise our religion ourselves and teach our pupils to do the same. This can be done in the daily morning devotional exercises and even, at times, throughout the day when the opportunity presents itself. The morning prayer should not always be a mere mechanical repetition of the Lord's Prayer by the pupils. It would be a great inspiration to all if the teacher, in the privacy of his own room, would occasionally give a prayer and pour out his heart and soul to the Father for guidance and let his pupils see the finer side of him. They would never forget a "praying teacher."

We should remember that to these children, who are away from their parents the most important years of their lives, we must be not only a teacher in the real sense of the word, but a father, a mother, a friend and counselor as well. If *we* fail them, what hope is there for them to find their souls?

In all our endeavors to do our duty let us not overlook the cultivation of the correct attitude toward our school management and to our fellow workers, that we may never so much as leave the faintest suspicion among our pupils that we are not loyal to our leaders, to each other and to our own manhood and womanhood.

Again we repeat: Our responsibility is great! Our sphere of influence does not end with the souls that pass through our hands, but the good seed, if it is carefully planted and well watered, with our tears if necessary, will blossom and bear fruit, not only in this generation but in generations to come, long after we have passed on to our reward and have heard the voice of the Teacher of all teachers saying, "Well done, thou good and faithful servant."

The Missing Mind

A THRILLING CHAPTER IN THE LIFE OF ANTONIO CHIACCHIOGAETIANO

By HARRIS TAYLOR, LL.D.
State Supervisor of the Education of the Blind and the Deaf, Albany, New York

IMAGINE for the time being that you are the principal or social worker of a school for the deaf. This you should easily do, for unpleasant ideas come to us all. Mr. and Mrs. Chiacchiogaetiano appear upon the scene. They are accompanied by their son Antonio who approaches with more than reluctant feet. The father explains their mission in this manner:

"My boy he no hear heemself. Ze doctor say he grow out, but he no hear heemself."

This is not the first time a physician had told a parent that his child would outgrow deafness.

In routine performance of your new duties you ask the full name of the prospective pupil. You then realize that his Christian names fully balance his polysyllabic cognomen. Joseph and Mary, one of the Godhead, an apostle, three saints and one obscure individual had been honored when Antonio left the baptismal font. You immediately decide that for all articulation purposes the boy shall be known as Tony.

You ask if the boy can talk. Mr. Chiacchio—well, the father—replies: "He no talk, but he say ze 'papa' and ze 'mamma,'" and he swells with pride at these evidences of filial affection. You do not have the heart to tell him that once repeated labial stoppage of the voice through the mouth will produce 'papa' or through the nose will produce 'mama.'

"You maka heem spik?" anxiously inquires the father.

You promise him that his son shall be taught orally, and you show him several children who have learned to talk in a most pleasing manner.

Here Mrs. Chiacchio—let us call her that for short—becomes very much excited. "You no teacha heem ze dam!"

she cries most anxiously. Her meaning is not clear, but gradually you learn that she is constantly shocked at the outrageously profane and obscene remarks of the boys on the street, so much so that she would rather let her son remain forever dumb than have him contaminate her home with such filthy language.

By all that's holy you assure her that the language of the teachers and officers is classical in its purity, and that even the men who empty the garbage and ash cans must tone down their remarks whenever a pupil is in sight or hearing.

The parents are favorably impressed, and you make friendly overtures to Tony, drawing him gently toward you. He resists in a most vigorous and insulting manner. As you wipe the moisture from your face, you realize for the first time that he is the spitting image of his father.

The father and mother depart, leaving Tony in tears and tantrums. His disturbance is not due so much to love for his parents as to violent disapproval of the persons who now have him in charge. As soon as you can, you call in the housemother and graciously permit her to share in all the glories incident to the advent of Tony.

Having thus served temporarily as principal, we now return you to the schoolroom. Tony has now entered your class; may the Lord have mercy upon you both! What are you going to do with and for Tony, especially in the beginning?

You have numerous precedents for any one of several courses, except probably the one you ought to pursue. Here and now we come to our chapter heading "The Missing Mind." In this connection I do not mean the mind that is lacking or lost. I mean the mind that misses its opportunity to function properly and to the best advantage of the child, the mind that misses fire at the crucial moment.

As I have previously inquired, "What are you going to do about Tony?" Here are some of the ways or manners of approach from which you may select:

1. *The silent sign-language approach,* such as was in general use at the time I began to teach the deaf. Such gestures

as the child had were utilized in the development of a sign language, which in turn was used to explain the written or printed word. Communication between teacher and pupil was free, above board and was limited only by the capacity of the child and the shortcomings of the language involved. As soon as possible the child was taught English through finger spelling and writing. The use of manual spelling gave greater variety to conversation; if you did not know how to sign a word, you spelled it on your fingers; if you did not know how to spell a word, you could sign it. Articulation and lip-reading received about as much attention as rhythm teaching does today and the results were usually about as effective.

By this approach within the first year the pupil acquired a large vocabulary and some language. As a rule he learned enough words during his first two years to keep his language mixed for the remainder of his life. Unless you are a student of archaeology, there is no need for me to dilate further upon this approach, for it has been generally abandoned for these many years.

2. *The silent manual-alphabet approach,* which would enable you as soon as possible to substitute finger spelling for gestures, but in other respects is similar to the one above mentioned. This method, with important modifications, was first brought into prominence in America at the Rochester School for the Deaf; and there undoubtedly fine results were attained in the use of English. The use of the sign language was strictly forbidden; finger spelling was always encouraged; the result was that out of the schoolroom finger spelling was the prevalent medium of communication. We must concede that for many pupils finger spelling is easier to understand than lip-reading.

The principal of the Rochester School, Dr. Zenas F. Westervelt, took the view that this method of communication greatly improved the English of the pupils, a view that was logical in theory and seemed to be borne out in practice. Dr. Westervelt also insisted that this method improved speech and lip-reading. As for speech, his position appeared

illogical; as for lip-reading, later tests failed to demonstrate the correctness of his position.

With the rise of the oral method, the influence of the Rochester School began to wane. Even in that school the approach during the first year has changed to admit more oral instruction. Please bear in mind that it is of the first year that I am writing.

If this approach with a beginning class is not dead like that of the sign language, it is at least moribund; so we need something more lively for friend Tony of the unpronounceable surname.

3. *The oral sign-language approach,* in which gestures, or the sign language, are used to illustrate what the teacher wishes, but these are discouraged, in theory at least, as soon as the pupil has acquired writing, speech and lip-reading to express his needs and desires. This approach, like the first named, causes the child to assume that signs are his vernacular language, and invariably I have found that the teacher acts upon the same assumption. In all crises such as the explanation of a new word or idea the child logically expects that the sign language shall be used to meet the occasion. This seriously militates against the rapid or accurate acquisition of either spoken or written English. I have seen this approach used with hundreds of deaf children within the past thirty-five years, and I am firm in the belief that it has failed, now fails and will continue to fail of the best results in language or mental development.

4. Next we shall consider what may be called *the unsupported oral approach.* Here all the work of the teacher is along pure oral lines, but out of the schoolroom officers and employees frequently use gestures, and the sign language is the most frequent means of communication among the pupils. Here there is great danger that in their efforts to save time, employees and others will use speech so little and signs so much that we may look for one or both of the following:

(1) That it will be very hard for the pupil to appreciate the value of English as the dominant language.

(2) That the pupil may have so little practice in speech and lip-reading that it will be hard for him to make himself understood when he does speak, or to read the lips when any one speaks to him.

Under these conditions it is very difficult for the teacher to fix with adequate practice what she has taught in the schoolroom, and there is great danger that she may give up hope of material improvement in either speech or lip-reading except when the child is under her immediate direction.

She often thinks and probably says that the pupil could learn fast if officers and employees would only talk to the child and demand that he express himself in speech. These officers and employees, in reply, say: If she would only teach the pupil to understand either spoken or written language, or to read the lips, they could talk with him to better advantage. Such a contest is known among the masses or common people as "passing the buck." This great American pastime goes far toward developing the art of repartee—sometimes all the way from the "retort courteous" to the "lie direct"—but it is not on record that "passing the buck" ever contributed greatly toward the education of a deaf child.

5. *The oral approach.* Here all the school work is oral and in general communication between teachers and officers and pupils by English written or spoken. Signs are forbidden in the schoolroom and discouraged elsewhere. The main difference between this approach and the last named is in the practice out of the schoolroom.

6. *The pure-oral approach.* In order to develop and fix speech and lip-reading habits as early as possible, the finger alphabet is not taught or used, and signs beyond pointing and pantomime in the early stages are not permitted. In fact, inability to understand either signs or finger spelling is a negative virtue in which the teachers take great pride.

The written or printed word is always postponed until the child has first received the idea through speech and lip-reading. In the beginning the development of ideas and the expression of thought are deliberately held back until such

development can come through the media of speech and lip-reading. This manner of approach is admittedly slow in the beginning, but is justified on the ground that it makes for better and more perfect progress a few years later.

I once shared this view and in my zeal I put this approach into practice as far as the conditions would permit—and I hoped to improve the conditions. One point, however, continually arose in my mind; when a deaf child has already lost from three to four years during which time a hearing child gains so much, why is it necessary to accentuate this retardation for several years longer? I would recall some deaf children of intelligent deaf parents; these children came to school with a mental development far greater than that of other deaf children of approximately equal ability. It was true that these deaf children of deaf parents were developed through the sign language, but it was equally true that they excelled in oral school work. Their school progress was more rapid on account of their development. If so much could be done through the sign language, why could not more be done by using English from the beginning? It was obvious from even a casual study of such children of intelligent deaf parents that the ability of these children to think and to express their thoughts in their earlier years developed much faster than their ability to articulate or even to read the lips.

In a relatively small school with a high per capita cost and with pupils mainly far above the average in intelligence a great deal can be done by methods purely oral. Small classes, good equipment, teachers at tables with the pupils at meals, numerous supervisors or housemothers acting as supplementary teachers, supervised play, study and reading are causes contributing toward the desired end. Unfortunately, however, it would be difficult—nay, impossible—to duplicate very many of these conditions in many of the schools for the deaf today. Could a school with these ideal conditions do better with a different form of approach? Who can tell? No such set-up has ever been made for any other method in our country. However, we may infer from some of the experiments of Alexander Graham Bell and others that with

the same set-up better results could be attained and that greater progress could be made with the vast majority of the deaf.

7. *We now mention the Belgian approach.* Briefly this seems to attempt to parallel processes which do not develop at the same rate, and as I understand it and from what I have seen of it, this approach is pedagogically unsound.

I have mentioned seven avenues of approach, summarized as follows:

1. The silent sign-language approach.
2. The silent manual-alphabet approach.
3. The oral sign-language approach.
4. The schoolroom oral approach.
5. The oral approach.
6. The pure-oral approach.
7. The Belgian approach.

I am now almost ready to offer you another approach to our friend Tony; but before doing so, I wish to make a slight digression. All through this interesting paper I have carefully avoided the word *method.* I have done this because at its last meeting the Conference of Executives of American Schools for the Deaf abolished all mention of methods from their vocabulary. The issue of the ANNALS for January will no longer contain interesting descriptions of fruity statistics of methods of teaching the deaf. This repression is a strain upon me, so for my own ease and comfort I am going to use the word *method;* at the same time I shall explain its meaning as I construe it, so that all readers will have the same understanding of the word which has been relegated to the *index expurgatorius* of the Conference of Executives. As applied to teaching the deaf, I would say that a method is a standardized way of doing a thing. For instance, in the early days of Boston the cows took anything but a bee line in walking between their barns and their pastures. This was their *way* of going between the two points mentioned. When people built houses along these crooked cowpaths, the resulting streets became *methods* of approach or departure. So, when you have taught a certain way for a considerable time

without change or improvement, your way of teaching becomes a method. When a teacher or a school uses two different unrelated or antagonistic methods, the net result is known as a *system* of instruction.

I now offer the eighth avenue of approach for which you and Tony have waited so long, namely:

8. The Reading Approach

Again I ask you to bear with me patiently, because I want to theorize a little before I get down to schoolroom practice.

In her "Handbook of Child Psychology," 1931, Dr. Dorothea McCarthy said, in part: "Children understand gestures long before they understand words and similarly they use gestures first to express their needs and desires." Correctly understood, I believe this is true. Starting with the birth cry, the hearing child is vocal through his career, but the earliest sounds are reflex in character. Variations in sound are more indicative of differences in intensity than anything else. The primitive squall, articulate forms of crying and babbling are all important preparatory exercises for speech. But all this is not speech itself. The spoken word for the purpose of expressing an idea comes after gestures have been used for the same purpose. In the same way gestures make earlier appeal than speech and are more easily understood. In this connection please keep these points in mind: (1) That gestures come before speech as means of communication; (2) that from the initial cry or squall through all forms of vocalizing the speech organs have had from ten to twelve months of excellent practice before the child attempts to express his ideas by word of mouth; and (3) that words by the hundreds of thousands have been spoken to, and in the presence of, the hearing child before he begins to respond in kind.

In the Annals for March, 1935, and for March, 1936, Mr. Charles G. Rawlings called attention to the slowness of the speech of the deaf and suggests several causes, which, if I remember correctly, are: (1) Lack of rhythmic pattern, (2)

the word-by-word manner in which the vocabulary is built up, and (3) the usual method followed in teaching the pronunciation of words or in the development of elementary English sounds.

I think we may agree with Mr. Rawlings as far as he goes, but he fails to state all the causes. I would add the lack of adequate practice in the use of the organs involved in the mechanism of speech necessary to place all muscles under immediate and unconscious control. Then again the young deaf child as ordinarily taught has to think of too many things at once. He must bear in mind the new words to express his thought, the combination of the sounds to produce these words and the arrangement of these words in their grammatical form and sequence. A slow halting habit is formed in the beginning and this habit is rarely overcome.

In 1883 Alexander Graham Bell said: "Commencing with oral language impedes the progress of the congenitally deaf. . . . Written language should be the basis of instruction." At another time Dr. Bell said, in substance: "I would not teach a deaf child language in order that he may read; but I would teach him reading in order that he may understand language."

In 1680, Dalgarno had recommended a course very similar to that recommended by Dr. Bell and followed by him in teaching a four-year-old child to read. Incidentally I may add that you could learn a good deal about teaching the deaf if you would study Dalgarno, Wallis, and others who lived in the 17th century.

In the reading approach let us go first to the dormitory or bedroom. There let us label everything with its name; the printing office may help you. If not, use a typewriter, or print neatly by hand. At least one of everything should thus be named. Chairs, beds, various pieces of furniture, articles of clothing, toilet articles and everything else pertaining to that region. For everything thus labeled there should also be a corresponding flash card.

Last fall I saw a group of deaf children—none under three but all under five years of age—who in a very short time

were able to select a number of objects when shown a flash card bearing the name, and *vice versa.*

Carry out the same idea in the dining room, the play room and the schoolroom.

In an astonishingly short time deaf children grasp the idea; and matching objects with flash cards, *et cetera,* are games which offer many variations; these are games that little children enjoy most intensely. I speak from observation and experience, not theory, in this connection.

The next step is to introduce the sentence, such as: "Comb your hair; Brush your teeth," etc. Please don't call these sentences "commands." Make these natural sentences, however, short. Don't write funny sentences on the theory that poor English is easier for the deaf to understand. Names of persons can be introduced in the same manner. Work in questions, but do not teach question forms. Use the interrogative form to seek information that you do not have, or, at least, that the children think you do not have. Let us suppose Mr. Smith comes into the schoolroom and puts his hat on the table. He goes out, and in his absence you put his hat in the closet. He returns, looks on the table and asks "Where is my hat?" Every question form can be introduced as a natural desire to learn something you do not know.

Bits of information can also be given in the same way. Whatever is done should be done with the idea as far as possible of exciting and maintaining interest.

So far we are giving information and developing ideas. The pupil's vocabulary is one of comprehension, not expression, at this earliest stage.

Whenever using a flash card or pointing to something otherwise written, be sure to speak the work or sentence. Do this in the beginning without drawing particular attention to the lip formations. Later make efforts to show relation between the object, or action, the printed words, and the movements involved in oral presentation of the same idea or thought. The next step is the development of lip-reading without the printed word.

You are now well on your way with lip-reading, and to

the fullest reasonable extent it should be relied on to the exclusion of print or manuscript for certain periods of the day.

As early as possible develop the idea of self-reliance; set up conditions for the introduction of a new word which could obviously mean only one thing. Development of the power of inference is absolutely essential to success in learning reading or language in any form. The teacher who expects to explain every new word or new grammatical structure will never get very far with her class. If she expects the pupil to get any large measure of his language immediately from her, she should better stick to "Basic English" with its 850 words—and then spend hours in trying to reduce this vocabulary.

Of course there must be some direct teaching of language; but the real great task of the teacher consists in utilizing conditions and circumstances so as to enable the child to infer the meaning of language from the context. This work should begin immediately upon the child's admission to the school. Training in observation and inference should begin at once. Obviously the child's interests should receive careful study and should be utilized for purposes of instruction. Profound study, consummate skill and infinite tact are needed to utilize the facts of life for the orderly acquisition of language for a purpose. There are two dangers to avoid, and these we may designate as the schoolroom Scylla and Charybdis, as follows:

1. That language work will degenerate mainly into inane "news" with insipid repetition from day to day, having no variations except those provided by changes in the weather.

The barometer and the thermometer are valuable scientific instruments, but they are inadequate as bases for a course of study in language.

2. That the teacher will endeaver to bring about "conditions" and "circumstances" so artificial and standardized as to defeat her purpose.

The stage has its laws which must be obeyed; no matter whether the playwright or the actor is dealing with light

opera, heavy tragedy, comedy or what not, he must conform to certain accepted requirements. Despite this, however, both writer and actor have a wide field for the play of individuality. The burlesque stage is the only one that is standardized. In education the schoolroom procedure of a primary class of deaf children is about as thoroughly standardized as burlesque is in the theater. Unless there is a change, the time will soon come when the school for the deaf will have the same relation to the best in education that burlesque has to the best of the legitimate stage.

So far as the pupil is concerned, the development of language should be natural and its end should be the reception or presentation of thought or information. So far as the teacher is concerned, the case is different; to do her work as I have indicated, the teacher must be a serious student of English grammar; she must know the grammatical principles, or language pitfalls which lie in the paths of those who must learn our language through sight alone.

Although I am an adherent of the natural method, I am under great obligations for valuable assistance rendered by able teachers who adhere to the scientific method of teaching the deaf. Among publications by teachers of this school, I may mention the Sweet Readers, the Five-Slate Method, the Croker, Jones, Pratt books and the Fitzgerald Key. Every one of our teachers should study and master each and all of these valuable contributions toward the education of the deaf.

The greatest weakness of the teacher of the deaf today is an inadequate knowledge of English grammar and of those peculiarities of our language which grammar fails to cover, but which are established by usage. More than once I have been in schoolrooms where it would seem that all the grammar anybody knew was written on the blackboards or appeared on charts which decorated the walls. These teachers expected their pupils to learn grammar instead of studying it themselves.

Many hearing persons have learned to speak and write correctly with little or no knowledge of formal grammar. I

have known deaf children who had been in school for ten years without knowing a proper noun from an adverb of time, yet these children had a remarkably good use of English. The teachers of these pupils, however, knew their grammar and used it effectively.

Drawing should be taught from the beginning. Intelligently used, drawing will greatly facilitate the work in reading.

From the beginning the teacher should endeavor to get the child to use his voice. At first this should be done without any association with English vowel sounds. Ease of utterance is the prime requisite in the beginning. This plan is likely to develop a fair quality of voice. Without such ease the voice will surely be pinched, painful, harsh and disagreeable. Next should come control of the voice as to vowel quality, force and pitch. All such exercises should be with the voice prolonged far more than in any speech sounds.

Daily gymnastic exercises should include facial gymnastics or exercises to control the use of the lips, tongue, velum and jaw. These exercises should be carried on without any attempt to associate positions with articulation, but merely as variations in exercises of muscles in other parts of the body. I repeat, I wish these exercises to be wholly disassociated with anything pertaining to speech or articulation.

There is a reasonable expectation that by this time we shall have developed—

1. A pleasing voice which can be lowered and raised both as to volume and pitch and which can be molded into any one of several prolonged vowel sounds.

2. Muscular control of the lips, jaw, tongue and soft palate so that these can be placed in the position and given the movement necessary to produce all consonant sounds or articulations.

Now we are ready for the development and combination of elementary English sounds. These should be given in the English unit of speech, the syllable—that is, in combination. In no other way can they have their true quality and quantity adequately developed.

You may think it advantageous to use a single element in correction of a persistent error. You may get a good position in this way, but the element produced in this way will not have its true speech value. If, however, the course I have outlined is pursued properly, such errors are not so likely to occur.

It was my rare good fortune to study the development of elementary English sounds under Dr. Caroline A. Yale. The time was so short that my learning was necessarily meagre and superficial, but the inspiration of my teacher sank deep into my soul. Dr. Yale's writings and lectures on this subject have influenced the profession to a remarkable extent. In fact, we may say, generally speaking, that she "set" the procedure in the beginnings of articulation and speech teaching. Lacking her knowledge and vision, many teachers were "set" very badly; unfortunately, however, those varying from her methods, as a rule, have not been "set" at all—and that is worse. I regard a thorough study of the element method as essential to the development of good speech. Voice, modulation, grouping, phrasing, speech patterns, control of volume and pitch—I say, all these have their part; but a beautiful well-modulated voice accomplishes little unless it carries a message that can be understood.

Before attempting to produce elementary speech sounds, we have done two things:

1. We have reduced consonant positions and movements very largely to subconscious or automatic action.

2. We have developed voice, molded into nearly all English vowels, with the exception of quantity, this also very largely through subconscious or automatic action.

As a result articulation requires the child to concentrate upon fewer problems than is possible under the usual methods of today, and there is less cause for the slow, hesitating speech almost universal among the congenitally deaf.

From such syllabic development of elementary sounds we go next to speech. The child knows that words have meaning; now he knows that he has a new way of using words, a new way of expressing thought. For the moment we shall now go to something else.

Writing should grow out of drawing. Imitation properly directed is the procedure. Before the pupil has learned all his letters, he will have been able to print many words, thus giving expression to ideas in the same way he has received them. Here again bring in as few new things at one time as possible.

All too often teachers try to teach grammatical structure to children who hardly know as many words as there are parts of speech. What these children need is vital language. They need means of receiving information, ways of telling what they have in mind, media for exchange of ideas.

Exercises in lip-reading often consist mainly in looking at the teacher's mouth, hesitating and finally pulling a celluloid fish or perchance a shell out of a nearby basket amid the handclaps of the class. It would deflate the egotism of the two chief actors in this drama if they knew that most of the class were applauding from imitation rather than observation.

Exercises in speech too often overlook the vital elements of interest and utility. Written work too often is the development of grammatical principles, and the acquisition of a hand-picked vocabulary which the child finds ill adapted to his own needs and desires. Too seldom does written work point the way to pleasure in the library or profit in the field or workshop.

"But," you may say, "deaf children make mistakes in language, and they need drill." So they do, so they do; only I would say the deaf need more practice in the actual use of language than they do in drill on grammatical structure. Call attention to mistakes, but to only one mistake at a time. "Nice people don't do such things"; "Your mother wouldn't do that," and such reminders would have more influence upon conduct than explaining a whole volume on ethics. It is the same with mistakes in language. Practice makes perfect in language as in other things. Of course, as in other things, practice should have able guidance.

Looking toward an early conclusion of this chapter I will say that reading offers the best approach to the young deaf child, both immediately and in its far-reaching relationship

to the after years of the pupil. I believe the general plan I have outlined offers the best available basis for co-operative work both in and out of the schoolroom, and every detail can be understood by household officers and employees. I can think of no other way in which language for a purpose can be introduced at the very beginning and with no conflict with either speech and lip-reading or written language.

What I have outlined is based upon a study of young deaf children, both personal and with the assistance of able parents and teachers of the deaf; upon a rather intensive study of primary work in three schools for the deaf and the relation of such work to that of the intermediate years; upon a very extensive though somewhat superficial survey of many schools for the deaf within the last year; also upon considerable theoretical study of the subject during the past eighteen years. The silent-reading studies and contributions of Dr. Helen Thompson at the Lexington School for the Deaf applied to children older, chronologically and in school years, than those with whom I am now dealing. I am endeavoring to lead up to the age where silent reading as outlined by Dr. Thompson may be logically introduced, and in such a way as to cause no break in continuity.

With your assurance that as the teacher of Tony you are going to use the reading approach, I promise to visit your schoolroom very often, study your work and possibly make a few suggestions. Using the phraseology of a great and much beloved monarch, I shall then make known to "all the world and the rest of mankind" the results of your labors, thus writing a second chapter in the Life of Antonio Chiacchiogaetiano. If you live up to my expectations, this chapter will bear the heading of "The Awakening Mind."

A Comparative Study of Deaf and Hearing Students

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THE QUESTION of the precise effect of destruction or impairment of one sense upon the other senses or upon motor performance has long been of interest to both the psychologist and the teacher of the deaf—to the former—because scientifically the problem has bearing on the relation of motor development to the development of perception and ideation, and to the latter because of its practical application in such spheres as vocational guidance, aptitude determination, and social and occupational adjustment.

A National Research Council Fellowship during the years 1932-1934 enabled the author to investigate the effects of deafness upon visual and motor performance. The work was done at the Columbia Institution for the Deaf in Washington, D.C., under the direction of Dr. Knight Dunlap, head of the department of psychology of the Johns Hopkins University, with the co-operation of Dr. Percival Hall, president of Gallaudet College.

Laboratory facilities and accommodations for the investigator were provided at Gallaudet College. Some of the apparatus was constructed and the forms required were printed by the students in the college shops. Other pieces of apparatus were obtained by loan from the Psychology Laboratory of the Johns Hopkins University. Deaf subjects used were all in attendance at Gallaudet College or Kendall School while control subjects were obtained from the public schools of the District of Columbia and the American University.

The investigation was largely exploratory in nature. The findings, it is hoped, by indicating some performances that can be profitably studied in the future, may thus contribute toward the mapping out of further experimental programs. The choice of performances to be tested was largely de-

termined by such factors as the adaptability and availability of recording instruments, the number and ages of deaf subjects to be tested, the amount of time these subjects could devote to the experiment and the probable time limits of the investigation itself.

Every regular student of the Columbia Institution for the Deaf was included in one or more of the tests. These subjects varied in residual hearing from zero to 75 per cent. They ranged in age of onset of deafness from birth to fifteen years and in speech proficiency from those with normal language to those whose speech vocabulary was limited to two or three words.

Instead of proceeding with arbitrarily simplified methods it was thought advisable to run a rather elaborate preliminary experiment with a few subjects. For the initial investigation 28 deaf boys, pupils of the Kendall School varying in age from eleven to twenty years were given tests in tapping, steadiness and balancing. These performances were chosen because of their comparative simplicity, because they could be used in testing a wide age range and for their probable value as indices of basic motor reactions. The tapping test permits of an estimation of speed, accuracy and rhythm of movement. The steadiness test indicates hand-eye co-ordination and inhibition of movement. The balancing test was chosen because it appears to provide a means of determining the relationship between balancing ability and the condition of the inner ear or more particularly of the semicircular canals.

On the basis of the results obtained certain changes of technique were developed, improvements were made in recording apparatus and the need for additional tests was emphasized since the three tests chosen were found to be somewhat inadequate for the peculiar conditions of the problem. In the later part of the work, accordingly, a test of visual perception involving eye-movement and a location-memory test were included. A number of the subjects were given the Johnson hand-eye co-ordination and the Ishihara and Nela color-blindness tests. Some also were rotated to obtain nystagmus reactions.

Tapping.—In the tapping test the Dunlap double-tapping plate was used. This apparatus consists of two brass plates three inches square mounted on a heavy cast-iron base, and separated from one another by a bakelite strip one inch wide. In double-plate tapping the subject strikes the plates alternately with an insulated stylus which he holds in his hand as he would a pencil. Ninety-six deaf subjects altogether were tested in tapping.

Since double-plate tapping permits of more accurate recording by insuring more reliable contacts; since the double plate eliminates muscle tremor, which frequently complicates the interpretation of records obtained from the single plate; and since correlation between single-plate and double-plate tapping is high, single-plate tapping was not used except in the preliminary experiments. Records of the double-plate tapping were obtained for each hand for one one-minute and one two-minute period each day for five consecutive days.

Almost without exception the deaf subjects showed improvement with practice over the five-day period of the test. This was interesting since several authors have suggested that tapping does not improve with practice.

Classified by ages, the 96 deaf subjects showed an increase in speed of double-plate tapping up to age 23 or 24 after which the rate dropped. Hearing subjects also show definite increase in speed of double-plate tapping up to age 23 or 24. There appears to be no significant difference in tapping performance of deaf and hearing boys.

Little sex difference is shown in tapping, deaf boys being only slightly superior to deaf girls.

Steadiness.—The test of static hand control which is commonly called the "steadiness test" gives an indication of hand-eye co-ordination complicated by ability to inhibit movement. In this test the subject attempts to hold a stylus in a hole in a brass plate without making contact with the sides of the hole.

The Dunlap steadiness tester was used throughout the experiment. It consists of a round brass plate six inches in diameter near the circumference of which are drilled fifteen

holes, graduated in size from 7/64 to 32/64 inches. The plate is adjusted vertically for each subject so that its center is shoulder height from the floor. The plate may be rotated so that the subject can be tested in any hole without changing his position. The apparatus is arranged so that an electrical circuit is completed whenever contact is made between stylus and plate. Only the 10/64-inch and 14/64-inch holes were used.

Ninety-six deaf subjects were given the steadiness test, 56 boys and 40 girls. For controls, 167 hearing subjects (81 boys and 86 girls) were tested in steadiness.

With the exception of the deaf boys used in the preliminary experiments where longer periods were used, both right and left hands were tested for 20 seconds in each of the two holes each day for five days. The total number of contacts during each 20-second period was recorded by means of a Cenco counter.

Using the results of the first 20-second period as an index, the median number of contacts made in the 14/64-inch hole by the deaf subjects was for the right hand, four; for the left hand 9.5. For the hearing subjects these medians were seven and twelve respectively. In the 10/64-inch hole the median contacts made by deaf subjects were sixteen for the right hand and 31 for the left hand. The corresponding median contacts for the hearing group were 27 and 38.

The superiority of the deaf in the steadiness test may be partly due to their greater average age. The average age of the 96 deaf subjects was 16.7 years, while the average age of the 167 hearing subjects was 14.0 years. If the eleven oldest deaf subjects are omitted, however, the remaining 85 subjects have the same average age (fourteen years) as the hearing group. The median contacts for this deaf group were for the 14/64-inch hole, right hand, 7, left hand, 11; for the 10/64-inch hole, right hand, 19 and left hand 34, as against 7, 12, 27 and 37 contacts respectively for the hearing group, the deaf still maintaining some superiority.

It has been suggested that the deaf should excel in the steadiness test on account of their immunity from distrac-

tion. While they are not disturbed by the usual sound stimuli, observation of deaf subjects in the laboratory showed them to be much more easily distracted by visual or vibrational stimuli than were hearing subjects. Sudden movement on the part of the experimenter distracted the deaf subject and at times was interpreted as a "stop" signal. Such stimuli as footsteps across the floor of an adjoining room or the slamming of a door in another part of the building, which would be unnoticed by the average hearing subject, may be exceedingly distracting to the deaf subject.

Balancing.—The deterioration of the semicircular canals which frequently accompanies deafness, results in marked disturbance of equilibrium and balance. At night when visual cues are absent, many of the deaf experience difficulty in maitaining a straight line of march. Some excellent deaf swimmers never dive lest they lose their sense of direction under water and be unable to find their way to the surface.

Balance was tested on the Dunlap balancing board. This apparatus is not to be confused with the long, narrow "walking board" which is sometimes referred to as a balancing board. The Dunlap apparatus consists of a platform 18 inches square with its median axis resting on ball bearings. Stops located beneath the board are adjustable vertically, thus controlling the length of arc through which the board swings. Great difficulty was presented in working out an adequate recording device for this apparatus but finally by means of an arrangement of four Cenco electric counters the balancing performance of subjects was recorded for three angular limits, these being approximately 3°, 11° and 19°.

One hundred thirty-nine deaf subjects (79 girls and 60 boys) and 163 hearing subjects (77 girls and 86 boys) were tested on the balancing board. All subjects, both deaf and hearing (except the preliminary group) were given five one-minute trials a day for five days.

Age differences were less marked in balancing performance than in any of the other motor tests used in the investigation. Considerable improvement was noted up to age nine, but beyond that age individual differences were so great

that any trend of the averages for the various age groups was obscured and consequently improvement with age was not clear.

Boys were superior to girls in balancing at all three angular limits. Deaf boys were superior to hearing boys and deaf girls were superior to hearing girls in average performance of the five trials of the first day. In the average of the 25 trials of the five days' performance hearing subjects were superior to deaf subjects at the first angular limit (3°). At the second limit (11°) the hearing group were only slightly superior while at the third angular limit (19°) the deaf were somewhat superior. This seems to indicate that the same type of performance was not being tested at all three limits.

If the difference between the average of the first two days' performance and the average of the last two days' performance is accepted as a criterion of learning, failure to improve on the balancing board is the exception rather than the rule.

Through the courtesy of the U. S. War Department a Bárány chair was obtained and 125 deaf subjects were given the standard tests for nystagmus (eye movement due to rotation). Each subject was turned first toward his right, ten turns in 20 seconds, time of his horizontal nystagmus to the left being taken with a stop watch. The subject was then turned to his left, ten times at the same rate, and his horizontal nystagmus time to the right recorded. Twenty-nine of these deaf subjects failed to show any nystagmus, and all but one of the deaf subjects giving nystagmus reactions exhibited more nystagmus in one direction than in the other. Five subjects showed zero nystagmus in one direction and varied from 7.4 to 20.8 seconds in the other direction.

As a final test on the balancing board the subjects were given one one-minute trial while blindfolded. Balacing performance of both deaf and hearing groups while blindfolded was inferior to performance with eyes open. Six deaf girls and nine deaf boys were unable to stand unassisted on the balancing board while blindfolded. That is, application of the blindfold reduced balancing performance to zero. None of the hearing subjects had to be held on the board. While

blindfolded hearing boys gave superior performance to hearing girls regardless of the angular limit. This male superiority was not evident in the case of the deaf subjects. Hearing subjects were superior to the deaf subjects at every angular limit when the blindfold was worn. The results in the nystagmus and blindfold tests seem to indicate that the deaf learn to compensate for deterioration or loss of the equilibrium mechanism by using muscular and visual cues.

Location-Memory Tests.—Hofmarksrichter has concluded from his investigations that because of finer acuity and more continuous practice the visual imagery of the deaf is superior to that of hearing persons—that "better seeing" compensates for loss of hearing.[1]

In order to investigate the hypothesis often applied to the blind and sometimes to the deaf, concerning the improvement of one or more sense modes due to the loss or impairment of another, a test involving visual-memory span and location memory was devised. Twenty small common objects such as pin, screw, cork, match, etc., were placed one in each of twenty square compartments on a white board. After the subject had observed the objects for one minute, they were removed from these compartments and placed in a large compartment along with twenty objects previously unseen, each of which was related to a test object by association. For example, needle, nail, toothpick and rubber stopper were associated objects corresponding to the test objects pin, screw, match and cork respectively. The subject was required to replace the original objects in their correct compartments. Color differences between associated and original objects were eliminated as much as possible in devising the test so that deaf and hearing subjects who have taken the test blindfolded may be compared with blind subjects where discrimination is made by touch alone.

The location-memory test was given to 204 deaf subjects (80 girls and 124 boys) and to 170 hearing subjects (81 boys and 89 girls). Each subject was tested individually and was

[1] Hofmarksrichter, R., Do the Deaf See More Than Those With All Their Senses? ANNALS, March 1933 (vol. 78, no. 2), pp. 113-116.

allowed to take his own time, no limit being set. The subject was not told that other objects would be mixed in with the original objects.

In the case of the hearing subjects there was increase with age in the average number of original objects correctly located, up to age 14, beyond which improvement was not clear. The deaf reached an average performance at 13 years which was not surpassed except at years 17, 21 and 23. There was decrease with age in the average number of incorrect responses up to age 15 with both hearing and deaf subjects.

The deaf girls excelled all other groups, deaf and hearing boys showing approximately the same performance and hearing girls falling somewhat below.

That intelligence is a factor seems to be indicated in this test since in both the deaf and hearing groups those with higher mentality on the average showed superior performance. The performance of the deaf subjects was superior to that of hearing subjects, but this difference was partly offset by the greater average age of the deaf subjects.

Speed of eye movement.—A test of visual perception involving eye movement suggested by Dr. Harry M. Johnson of American University was given to 154 deaf and 172 hearing subjects. There were two test objects each of which consisted essentially of two diffraction gratings three inches in diameter so mounted that one grating could be rotated with respect to the other. The test objects were adjusted so that nine dark lines separated by white lines were visible on each field. By rotating the two gratings on either test object without changing their relationship to each other, the lines could be made to cross the field in any desired direction. For the purposes of the test four directions were used, vertical, horizontal, and the two diagonals. Each subject was given sixteen presentations, which included all the possible combinations of the four directions on the two objects arranged in chance order. The test objects were placed before the subject in the relation of a right-angled isosceles triangle, the subject being at the apex and each test object being six feet distant at either end of the base. The two objects were illuminated simultaneously from behind for a period of 3/20

seconds, the timing being controlled by a synchronous electric motor.

The subject was warned that the lights went on and off again very quickly and that he had to be very alert if he wished to see the lines. At a "ready" signal he was directed to look at the stimulus object on his left (unilluminated the test objects appeared as round black spots) and as soon as he saw the lines on that object he was to glance quickly to the right so that he could see the lines on the other object, moving only his eyes and being very careful not to move his head. After each illumination period while both stimulus fields remained dark, the subject was asked to indicate the direction of the lines he had seen. His response was recorded and the direction of the lines was changed until the subject had observed the sixteen presentations.

Successful performance on this test increased with age. Hearing boys showed the best average performance at age 16 when they reported correctly 14.5 of the 16 presentations. Hearing girls' maximum performance occurred at age 21 with an average of 14 correct. This maximum occurred in the case of deaf boys at age 25 with an average of 14 correct of the 16 presentations. The deaf girls gave their best performance at age 17 with an average of 11 correct. If the ages are plotted separately beyond age 19, the curve for deaf subjects falls little if any. It seems that the performance of the deaf more nearly approximates or may even surpass that of hearing subjects after age nineteen, but more subjects in the higher age groups should be tested to verify this indication. The median of correct reactions for hearing girls was nine and for hearing boys eleven, while the median for deaf girls was four, for deaf boys seven.

Hand-eye co-ordination test.—The Johnson hand-eye co-ordination test was given to some of the deaf subjects along with other diagnostic tests as a guide to future study of individual differences. In this test the subject is required to draw a pencil line along an irregular pathway without touching its boundaries and without resting the hand or arm.

The test was given to 68 deaf subjects, 40 girls and 28 boys. These subjects ranged in age from five to 26 years

inclusive. One trial a day was given each subject with each hand for five days. Each subject was allowed to choose his own time. Records were kept of the number of contacts and the time taken for each trial. In general it was found that boys took less time but made more contacts than girls, while with both sexes there was a marked tendency for the number of contacts made with both hands to decrease with age. There tended also to be a decrease in time taken as the subjects became older although this was not so striking and was much more irregular than the decrease in the number of contacts. The disparity between right- and left-hand performance was extreme in the early age groups, decreasing to age fifteen after which the difference between the two hands was irregular, further decrease with age being slight. When the average number of contacts made by any subject was very small, zero or nearly zero, there was a tendency for the time of performance to increase. At every age and in both sexes fewer average contacts were made with the right hand than with the left.

Summary

1. Deaf subjects were superior to hearing subjects in the steadiness test, performance of deaf girls approximating that of hearing boys.

2. Deaf subjects excelled hearing subjects for the first day's balancing performance at all three limits and at the 3° limit for the average of 25 trials.

3. Deaf boys excelled hearing girls in balancing performance except when blindfolded.

4. When blindfolded, deaf subjects showed inferior balancing performance to that of blindfolded hearing subjects.

5. In the location-memory test deaf girls excelled deaf and hearing boys and hearing girls. Hearing boys excelled hearing girls.

6. In the speed of eye-movement test, performance of deaf subjects was inferior to that of hearing subjects.

7. Deaf and hearing boys showed no significant differences in double-plate tapping.

8. There was improvement with practice in double-plate tapping, in balancing and in hand-eye co-ordination.

9. Steadiness showed no improvement with practice.

10. Right-hand performance was better than left-hand performance in tapping, in steadiness and in hand-eye co-ordination.

11. Tapping, steadiness, location-memory, speed of eye-movement and hand-eye co-ordination performance all improved with age. Age differences were less marked in balancing than in any other test used, there being little improvement after age nine.

12. Boys excelled girls in steadiness, in balancing performance at all three limits and in speed of eye-movement.

13. Sex differences in rate of tapping were slight, deaf boys being only slightly faster than deaf girls.

14. Fatigue as evidenced by a slowing of the tapping rate during the one-minute period was general.

15. The disparity between right- and left-hand performance decreased with age in the hand-eye co-ordination test.

16. According to age deaf girls made fewer contacts but took longer time than deaf boys in the hand-eye co-ordination test.

A Special Report of Retardation of Children with Impaired Hearing in New York City Schools

[U. S. Works Progress Administration for the City of New York Project No. 6065 for the Conservation of Hearing of School Children. Field Office and Service Department, the New York League for the Hard of Hearing, Inc., 480 Lexington Avenue, New York City.

Report submitted to Mr. Irving Gerdy, director, Education Department, by Mr. Daniel Caplin, assistant director, Health Education, Board of Education, and technical supervisor, May 4, 1936.]

SPEECH sounds are perhaps the most important of all sounds for human beings to hear. The great handicap to the hard-of-hearing school child, which is reflected in his school progress, is probably due to his inability to hear what other people say.

A conservative estimate places the percentage of school children having definite measurable hearing losses at 10 per cent.[1] These children having slightly impaired hearing present a serious unsolved educational problem, and a costly one too, which may reveal itself in subject retardation or mental health hazards.

Early detection of hearing deficiencies is dependent upon early elicitation and recognition of abnormal symptoms. School hearing examinations are now conducted scientifically and standardized. This is due to the development of the audiometers. Tests by audiometer have been largely carried out in New York under supervision of the New York League for the Hard of Hearing, Inc., since 1927, and since 1931 also under the auspices of the Board of Education; but never before on a city-wide scale.

Over 600,000 children have been examined from March, 1934, to April, 1935. Each class, up to 40 pupils, is first tested by the 4A phonograph audiometer. Those showing a loss of

[1] "The Deafened School Child." Report of the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association with the co-operation of the American Federation of Organizations for the Hard of Hearing and the New York League for the Hard of Hearing, Inc., 1928. Prepared under the direction of Dr. Thomas D. Wood, Chairman.

9S.U.[2] or more on two 4A audiometer tests are considered as having a potential hearing impairment and are tested by the 2A audiometer for air-conduction and bone-conduction reception. This is the first time that such a complete examination has been accomplished on a large scale.[3]

A survey made by the late Dr. Franklin W. Bock of Rochester, New York, in that city showed that 221 deafened children had repeated grades 441 times, while 349 normally hearing children had repeated grades 130 times.

Retardation due to impaired hearing affects the child in a number of ways. It effects his social adjustment, his emotional welfare, his education and consequently his usefulness in later life. It also imposes additional educational cost to the community and to his parents.

The cost of children repeating grades will vary with the size of the city, the congestion in the schools, and other factors. In large cities where schoolroom space is in demand and where part-time classes may be necessary, the repetition of grades adds greatly to school expenses. In such cases not only must the cost to re-educate the child be considered, but since space is in demand a rearrangement of buildings plans may upset the school routine. For example, the repeating of 441 half-years by the 221 previously mentioned children cost the city of Rochester, $22,460.

The present program for the conservation of hearing of school children started January 23, 1934 as a Civil Works Service project for the purpose of ascertaining the ear and hearing conditions of the public school children of New York City, and as far as possible to make provisions for their education and medical care. On August 1, 1935 the project operations were transferred to the Works Progress Administration with a staff of approximately 200 teachers.

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[2] S.U.=Sensation Unit which is the minimum amount of loudness change than can be detected as such.

[3] Ear Conditions from the Preventive Standpoint, Edmund Prince Fowler, M.D., Surgeon-Director, Manhattan Eye, Ear and Throat Hospital; Past President, American Laryngological, Rhinological and Otological Society; President, American Otological Society; Director of Research and Clinics, the New York League for the Hard of Hearing, Inc.

The objectives of the project are to develop and carry on an ideal and typical school hearing program including the discovery of hearing impairment by scientific (4A audiometer) methods, individual diagnostic testing (2A audiometer), otological examinations, comprehensive follow-up through the schools and with the co-operation of the parents, doctors, and clinics, and lip-reading teaching. A periodic retesting program was set up as a routine procedure and an extension of the program into high schools and parochial schools was made.

The hearing of 774,576 children between the third and ninth grades in the elementary and junior high schools, and the senior high schools and the parochial schools was tested with the 4A audiometer. In addition and in accordance with the new objectives of the program, annual periodic retests were made. A total of 24,437 children have been retested with the 4A audiometer in 28 schools. These tests were given for the two-fold purpose of reaching the children coming up into the third grades and detecting any changes in the hearing level of the children previously tested.

The 22,451 children found with impairments on the 4A audiometer were given an individual hearing test for both bone and air conduction in speech, and also complete tone ranges. The machine used was a 2A audiometer. This individual hearing test is required as a basis for an adequate otological examination.

An otological examination is given to all children showing a hearing impairment on the 2A audiometer. To date 17,961 children were given an otological examination by project otologists. Many of these children have had a second examination by a private physician or clinic.

Lip-reading, the art of understanding a speaker's thought by watching the movement of his lips, is taught to every child having a definitely established hearing loss. The school otologist makes the recommendation for lip-reading on the basis of the American Otological Society ruling which states that a loss of twenty decibels or more in both ears is the basis for lip-reading instruction. It is not offered as special

education, but rather as additional instruction subject of a compensatory nature.

There are 6,435 children now receiving instruction in 415 schools throughout the city. This instruction is given by 94 teachers who divided their time among several schools.

The results of the survey have shown conclusively the necessity and the importance for making yearly tests to discover hearing impairments and to secure medical, school and home care for those found to be impaired. It is, therefore, recommended that an annual scientific hearing survey with proper medical and educational follow-up be made a permanent school activity.

Fowler and Fletcher[4] basing their estimate on a sampling of several city schools hold that there are approximately three million hard-of-hearing school children in the United States. In the light of our experience on this project alone more than one million children would not be impaired hearers if such programs were a regular school routine.

A more recent 4A audiometer survey (reported March, 1935) among New York City elementary school pupils above the low third grade indicates 3.17 per cent of the pupils examined to have impaired hearing in both ears. About 4½ per cent of the school population is estimated to be in need of otological diagnosis and 1½ to 3½ per cent to be in need of lip-reading instruction (*New York Post,* May 16, 1936).

The present special report covers the class program of four groups of children:

I. 4,566—Hard-of-Hearing Children
II. 5,310—Normal Hearing Children
III. 21,617—Hard-of-Hearing Children
IV. 16,841—Children who received otological examinations by Project Otologists

This report was initiated and compiled under the direction of Mr. Daniel Caplin,[5] assistant director of Health Edu-

[4] Fowler, E. P. and Fletcher, H., "Three Million Deafened School Children," *Journal of the American Medical Association,* 87, 1877; 1926.

[5] Mr. Daniel Caplin, assistant director of Health Education of the

cation, of the Board of Education, New York City, and technical supervisor of Project 6065, and Miss Estelle E. Samuelson,[6] Senior Project Supervisor.

Retardation Among 4,566 Children with Impaired Hearing on the Basis of Lip-Reading Cases

The 4,566 children in Group I were recommended for lip-reading instruction after they had been given two 4A audiometer tests, one 2A audiometer test, an otological examination by a trained otologist, and a re-examination by a private physician or a clinic.

The class progress of these 4,566 children before and after receiving lip-reading instruction is given in the tables on the following pages.

Retardation Among 4,566 Children with Impaired Hearing on the Basis of Lip-Reading Cases

Number of Children Receiving Lip-Reading Instruction.....4,566

1. Number of Children Showing Normal Class Progress .....2,649, or 58.02%
2. Number of Children Showing Retardation Before Instruction .....1,917, or 41.98%

Retardation	*Children*	*Per Cent*
1 Term	858	18.79
2 Terms	499	10.93
3 Terms	265	5.80
4 Terms	165	3.61
5 Terms (or more)	130	2.85

Board of Education, has taught and supervised in the elementary, junior high, senior and vocational high schools for about twenty five years. He was the first official to introduce the audiometer survey on a borough-wide scale in the Borough of Brooklyn in 1930 and succeeded in establishing seventeen lip-reading groups in as many schools at that time. He has been active in the field of social service about 30 years.

[6] Miss Estelle E. Samuelson has been for eight years an instructor and lecturer at Teachers College, Columbia University, New York City. Miss Samuelson has a lip-reading teaching license for the Evening Schools of New York City, holding such license since 1915. She has been affiliated with the New York League for the Hard of Hearing since 1918. She is co-author of "Lip-Reading for the Deafened Child" published by Macmillan Company, co-author of "Ears and the Man," published by F. A. Davis, Philadelphia, and many papers and articles on the subject of vocational guidance, employment, rehabilitation, and education of the hard-of-hearing child.

3. Number of Children Showing Retardation Since Instruction .....270, or 5.91%

Retardation	*Children*	*Per Cent*
1 Term	247	5.41
2 Terms	21	0.46
3 Terms	2	0.04

4. Number of Children Showing Acceleration Since Instruction .....24, or 0.52%

Number of Children Skipped—16* children

The ratio of retardation before and after taking lip-reading instruction is 2 to 1: *i.e.*, there is a retardation of one grade after taking lip-reading instruction to every two grades before such instruction. (See Schedules A and B.)

SCHEDULE A

Number of Grades Repeated Before Lip-Reading Instructions—3,961

	Number of Children Repeating Grades	*Number of Grades Repeated*
1 Term	858	858
2 Terms	499	998
3 Terms	265	795
4 Terms	165	660
5 Terms	130	650
Totals	1,917	3,961

Number of Grades Repeated After Lip-Reading Instructions—295

	Number of Children Repeating Grades	*Number of Grades Repeated*
1 Term	247	247
2 Terms	21	42
3 Terms	2	6
Totals	270	295

We find that prior to studying lip-reading a total of 1,917 children repeated a total of 3,961 grades. This makes an average of two grades per child.

Since taking lip-reading a total of 270 children repeated 295 grades in all. This makes an average of one retardation per child.

Thus, the ratio is 2 to 1.

*This number included one child who was transferred from the ungraded class to the regular grades and then skipped twice.

SCHEDULE B

DISTRIBUTION BY GRADES OF CHILDREN TAKING LIP-READING

Number of Children Taking Lip-Reading Instruction—4,566

1A-1B	6
2A-2B	45
3A-3B	93
4A-4B	478
5A-5B	850
6A-6B	904
7A-7B	739
8A-8B	782
9A-9B	315
Ungraded	215
Special Classes	139
Total	4,566

Since the majority of children who are now in 9A have studied lip-reading for a period of two years, they must have begun instruction in the sixth year. Their retardation prior to studying lip-reading was spread over a period of six years. Their retardation since 7A has been included in the figures "Retardation since taking lip-reading." The same is true of the seventh- and eighth-year group.

The mean grade of the children now studying lip-reading is 6B. Therefore, we may assume that the total retardation (3,961 as per Schedule A) has been spread over a period of six years or a retardation of approximately 660 grades per year.

Since the lip-reading instruction has been given over an *average period of one year,* we see that the total retardation during that time has been 295 grades. Thus the ratio is 2 to 1.

RETARDATION AMONG 5,310 CHILDREN WITH NORMAL HEARING

For purposes of comparison a group of normal hearing children were chosen from the same schools and the same grades as the hard-of-hearing group. They served as the control group. The retardation data for this control group are shown in the following statement:

Number of Children Showing Normal Hearing in Both Ears	5,310
1. Number of Children Showing Normal Class Progress	2,720, or 51.22%
2. Number of Children Showing Retardation	1,489, or 28.04%

Retardation	*Children*	*Per Cent*
1 Term	734	13.82
2 Terms	320	6.03
3 Terms	316	5.95
Ungraded classes	90	1.69
Special classes	29	0.55

3. Total Number of Children Showing Class Acceleration .....1,101 or 20.73%

Retardation Among 21,617 Children with Impaired Hearing Selected on the Basis of 4A Audiometeric Tests*

These 21,617 children showed some degree of hearing loss in both ears, and either one or both ears showed a hearing loss of nine or more sensation units. The 4A audiometer tests served as a basis of selection of these hard-of-hearing children. The per cent of children in this group that are retarded is practically the same as in Group I. (Group I showed 46.69% retarded.)

Total Number of Children Showing Impaired Hearing in Both Ears 21,617
1. Total Number of Children Showing Normal Class Progress ..... 9,502, or 43.96%
2. Total Number of Children Showing Retardation .....10,112, or 46.78%

Retardation	*Children*	*Per Cent*
1 Term	4,392	20.32
2 Terms	2,004	9.27
3 Terms (or more)	2,558	11.83
Ungraded classes	1,024	4.74
Special classes	134	0.62

3. Total Number of Children Showing Class Acceleration .....2,003, or 9.27%

Impairment of Hearing Among 16,841 Children on the Basis of the Otological Examinations†

During the period covered by this report, 16,841 children received otological examinations by Project Otologists.

An analysis of 5,000 otological examinations showed the following:

5,000 Otological Examinations Analyzed
1. Number of Children with *Pathological* Conditions Needing *Immediate* Treatment .....3,466, or 69.32%

*Retardation information taken from school records.
†Retardation information received from parents or children.

2. Number of Children Recommended for *Lip-reading Instruction by Otologists* ..... 2,343, or 46.86%
3. Number of Children Recommended for *School for Deaf* (P.S. 47, Manhattan)
   Recommendations made ..... 36, or 1.86%
   Recommendations pending ..... 57* or 1.14%
4. Number of Children who *Repeated Grades* prior to Project ..... 1,890, or 37.80%
5. Number of Children with Defective Speech ..... 545, or 10.90%

Conclusions and Discussions

A comparison of the two groups of hard-of-hearing children with the normal hearing group shows that the per cent of grade retardation among the former group is much greater than among the latter. If this fact may be taken to indicate that a lower intelligence level exists among the hard-of-hearing children than among normal children, it agrees with the findings of Dr. R. Pintner, Teachers College, Columbia University. He found that in comparing groups of normal hearing with groups of hard-of-hearing school children, the latter averaged lower in intelligence.

Pintner says that, "Several explanations may be advanced to account for the relatively lower mental status of the hard of hearing—for instance, auditory deficiency might be a handicap to normal mental development, or again, mental retardation may be caused by the same physical disturbance which was responsible for the auditory deficiency. A more likely explanation is that lower intelligence and poor socio-economic status are factors that contribute to auditory deficiency. As loss of hearing is frequently the concomitant or the result of infectious diseases, such diseases may be more prevalent and more prolonged in a setting of poverty or neglect."

He cites the studies and findings made by Madden and holds in abeyance his final conclusions and recommendations for the re-education of school children handicapped by hearing loss until the results of more intensive research studies which are now under way have been concluded.

One of the most significant facts of this study of hearing and achievement (as measured in terms of class progress)

* These children have not been given an otological examination, retest or both.

is the result achieved by the 4,566 hard-of-hearing children *after* they had received lip-reading instruction over a period of two years. Prior to receiving lip-reading instruction, these children repeated 3,961 grades over a period of six years. This would make an average retardation of 660 grades per year. After receiving lip-reading instruction for a period of from six months to two years, it was found that the retardation among the 4,566 children was reduced to 5.91%—only 270 children repeated 295 grades. These results seemed to indicate further that lip-reading instruction reduces in half the number of grades repeated by the average hard-of-hearing child. Just how much more energy and mental strain are consumed by the hard-of-hearing child who is not retarded in order to keep pace with his normal hearing classmates, or how much more advanced he would be if he were not handicapped with defective hearing, is problematical.

The number of children on register in the day elementary public schools as of March 31, 1935, was 727,719. A survey among these children to date indicates that 3.17 per cent have impaired hearing in both ears; about 4½% are in need of otological diagnosis; and 1½ to 3½% need lip-reading instruction. If lip-reading instruction continues to reduce the grade retardation of the average hard-of-hearing child to this extent in the future as it has in the past, and there is no indication to forecast that it cannot continue to hold this pace, then it will certainly be economically worth while to the City of New York to continue this type of instruction. This type of instruction will, in addition, increase the mental status of the child, his emotional stability, his self-mastery and personal adjustment, and his future socio-economic status.

Parental Co-operation

By Tom L. Anderson, M.A.
Principal in the Vocational Department, Iowa School, Council Bluffs, Iowa

For some years we have been actively seeking the co-operation of parents in the education of their children. The task is one which we cannot accomplish alone under the changing conditions of modern society.

In the normal operation of society, three agencies engaged in the preparation of the child for adult life are the home, the school, and the church. Each supplements the other.

Until recent years, the school for the deaf has been charged with the responsibility of functioning as all three of these agencies. Nor are we at all reluctant to bare our record of accomplishment under this grave responsibility. Pupils educated in the average school for the deaf in the past have been returned to society with good characters, with wholesome ideals of citizenship, and with the best conception of practical religion it is possible for such a school to inculcate. In the past, we have been "returning to society," but we fear that we have not made such a laudable record in returning pupils to the home.

As long as it was possible for pupils to find work immediately after they left school, they did so and quickly attained independence. In recent years, however, national conditions have changed so that seldom do young people find work immediately after leaving school. They must pass from school to home, and for an indeterminate time live in the home under conditions of average family life. Furthermore, they are dependent upon the family for assistance in finding work, and it is necessary for the members of the family to know their capabilities as well as to have their confidence. Such knowledge and such confidence are not mere incidents of casual contact.

For some years, the organized deaf people of Iowa have been agitating for the state to set up an agency within the Labor Bureau to look out for the employment interests of the deaf. The experiences of two other states which have

such agencies have been held up as examples. There is much to be said in favor of this plan in the light of conditions during recent years.

However, we feel confident that the interests of the deaf people of this state would be adequately served if we could bring about the full co-operation between school and home. We are not ready to admit that the state should bear the full responsibility for the economic welfare of a deaf citizen, in addition to that for his education and his training in some suitable occupation. A definite responsibility belongs to the home, and it is our aim to foster a better appreciation of this on the part of the parents of children in our school.

For many years, a State Parent Teacher Association, concerned with the deaf and the hard-of-hearing children, has been maintained in Iowa. It meets annually, at the state capital, during the week the State Teachers' Association is in session. This organization has long labored to interest parents of deaf or hard-of-hearing children in their joint responsibilities in the educational and economic problems of these children, whom the state desires to restore to citizenship in the most efficient manner possible. This organization, through its influential members, was of great assistance in securing the reclassification of the state school for the deaf as an educational institution. On the whole, the meetings of the P.T.A., as it is called, are of great value in correlating the efforts of the school and the home, to the end that the deaf and the hard-of-hearing children of the state shall get the best possible training for citizenship. A problem of the P.T.A., which is gradually being overcome, has been to secure a large attendance of parents. It is interesting to note that this organization began as a group of parents concerned with the furtherance of the day-school idea and the oral method, but today it is headed by the principal of the State School, and all elements are working together in harmony.

In most cases where a deaf child is sent to this school, the state takes over all incidental expenses connected with his education and maintenance while he is at the school. The

parents of a deaf child are thus relieved of considerable expense over the fifteen-year period the child is expected to devote to education here. If the child later goes to college, the state provides a scholarship fund which still further relieves the parents of expense for higher education. Therefore, we feel that the state is justified in expecting the home to absorb the young person during the hiatus between school and job, and furthermore to look out for his employment interests with greater efficiency, perhaps, that can be expected of an official with the entire state to cover. We firmly believe that if we can secure this intelligent co-operation from the home to round out the work of the school no such state official will be needed to bring about the full economic welfare of our deaf citizens, which we all desire.

We have in mind the alert attitude of some parents who have been showing a wholesome interest in their children and an intelligent appreciation of what the school is doing. These parents make frequent visits to the school, keep abreast of the progress being made, subscribe for the school paper, and keep informed as to what the children are doing. They also keep us informed as to their problems with the children while they are at home, and in some cases we have been able to bring about marked improvement in the conduct of children while at home through this knowledge of the troubles the parents are having. For example, the parents of one of our active young boys reported that he had been a great problem during the summer, showing disregard for the rights of others in the family, fighting with his sister, making unreasonable demands for privileges, sulking if his every demand was not met, and so on. Now, we knew this boy to be of average intelligence, not at all a problem boy here at school, so we called him in and had a good heart-to-heart talk with him on the subject of his family relationships. Having the details at hand we were able to point out to him specific errors he had made at home during the summer, and to show him where his duty lay. He seemed delighted with our intimate knowledge of his family life at home, and readily promised to do better. After the next summer's vacation, when the mother brought him back to school we asked

her how the boy had done. "There is not a better boy in all the country!" was her enthusiastic comment.

The father of another young man is earnestly backing us in our efforts to develop a more pleasing personality in his boy and to fit him for some useful occupation. The father's only fear is that we will not appreciate the good qualities he perceives in the boy, where we have had such frequent reminders of the imperfections. He need not worry. Working together this way, we will succeed in bringing out the best possibilities which are inherent in this boy.

We recently received a long letter from a father who feels that during the long Christmas vacation he had "found his boy." The father had set up a small woodworking shop for himself in the basement, and he was delighted to find that the boy wanted to spend all his time down there working with his Dad, and furthermore that the boy was an apt workman. Together they made things, and for the first time a real bond was forged between them. The father has written to us something of his plans for his "partner," and he outlines the part he expects us to play in fitting the boy for this new life alongside of his Dad. And will we do our part? This is "right down our alley!" Just give us time, for the boy is young.

Some time ago, we had a young man of the non-academic type doing full-time work in the shoe-repair shop. The son of a widow, he had a pleasing personality, was strong and healthy, with good common sense. He developed into a good workman. A harnessmaker in a nearby small town, who also operated a shoe shop, was reported to us as needing a helper to look after the shoe end of the business. We drove over to see him. The place seemed a desirable one for the young man. We took him over for a day's free work, just to show what he could do. The owner was pleased with him, and wanted him to stay. However (and here lies an important point), we were not in a position to take this boy out of school and put him to work. This part must be acknowledged as the responsibility of the parent. We explained the situation to her, and advised her to call on this man and, if agreeable to her, to make the business arrangement for her son.

She did so, came and took the young man from school and placed him in the job we had located for him. She took the full responsibility for handling the matter of her son's wages, finding a place for him to live, and keeping him on the job. The incident is a splendid example of the profitable co-operation between the school and the parent.

The mother of one of our advanced girls has worked with us for several years in planning her daughter's future, preparing for the after-graduation days. Cosmetology seemed to offer the most promising career. While we have been doing our part in training the young woman in our well-equipped shop, the mother has been getting information on state examinations, and seeking a possible opening for her daughter in some shop. She is prepared to start her daughter out independently in case no opening can be found for her in a shop. In short, this mother is doing the part we expect of parents in the scheme of full co-operation, and we are confident that things will work out to better advantage than if the mother left everything for some state official to manage. Certainly there is a closer tie between mother and daughter than there might otherwise be, and in this we believe that we are stressing first things first.

Our new report card system, adopted a year ago, is a move in the direction of keeping parents more fully informed as to the details of their child's progress in mastering the elements of scholarship and of citizenship. Never before have we so painstakingly supplied parents with such detailed information. It is supplied them in the hope that they will check each report against the others, note progress or lack of progress, and be prepared to assist us not only in remedying defects but in praising accomplishments. We desire to hear from parents who wish more complete information than these reports can give them. In every possible way we desire to bring the parents into the game, so that through our combined efforts we may hope to carry these children much farther than the school alone can carry them. Also in the hope that the parents will be fully qualified, when the time comes, to help their children find their places in the economic life of their home communities.

Hypothyroidism in Alalia Cophica

GLANDULAR DEFICIENCY IN ORAL DEAF

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AND

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THIS paper undertakes to report a case of *alalia cophica*, the lack of speech due to deficient hearing acuity, in which the complication of hypothyroidism existed. The effect of the hypothyroidism will be described as well as the progress resulting from the therapeutic treatment of this complication.

Personal History.—The case under consideration was a male, fourteen years of age. The hearing examination showed a two-thirds average loss in hearing acuity. The patient suffered the loss of hearing at the age of two years as a result of measles with complications. He entered a "combined" school at the age of six so that he had had eight years of speech, voice and lip-reading training.

Lip-reading.—He did not seem to be able, even after this period of training, to make any progress in lip-reading. He could understand familiar material fairly well but could not perceive new statements or questions. He seemed to be lacking in the necessary imagination to become a proficient lip-reader.

Voice Quality.—His voice had quite a natural quality. It was, however, distinctly nasal, air passing both through the mouth and nose on oral sounds. Also, he demonstrated a nasal twang, which is caused by constriction of the upper laryngeal opening.

Intonation.—His intonation contained little speech melody and failed completely to give meaning to his speech. His pitch changes showed a perseverated pattern. The key was quite high. His intonation might be described as a high monotone. His voice never came down but remained on the high

key continually. His duration intonation was very poor. He gave practically the same length to every word regardless of where it occurred in the sentence. He did not stop for periods and paid no attention to any sort of punctuation. His intonation could be called drawling but whining.

Pronunciation.—He was fairly proficient in the pronunciation of phonetic elements. In connected utterance, he found the phonetic continuums a bit difficult. He exaggerated assimilation. His vowels were rather good. He confused (s) and (sh). He was lax in the voicing of (j).

Articulation.—His articulation was not precise. His speech movements were slovenly. His pronunciations seemed to run together. He did not differentiate between phonetic elements.

Comprehension.—He could not understand what he read. He read very slowly and comprehended what he read more slowly.

Oral Reading.—In oral reading he read very poorly. He did not remember the rules for pronunciation and as a result had difficulty with new words. Often he would give a word just any sound to get passed it.

Language Ability.—In answering questions in writing or speech, he did purely memory work. His memory was very poor so that he could only recall, perhaps, two answers if five had been given him. The more questions, the less his percentage remembered. In many cases, he only memorized the first part of an answer. Thus, the meaning was entirely lost. He could not reason out a language answer.

Spontaneous Speech.—In spontaneous speech, he was quite poor. He had no ability in this at all, even when all he had to do was to revamp the language of the question with a picture illustrating the answer before him. Also, when all the nouns in a picture were written down, the meaning seemed to be entirely lost and his answer hopeless.

Sign Language.—In sign language, he did not talk rapidly. His signs ran together. His concepts were meager and had no originality.

Academic Progress.—In all school subjects, he was slow. He seemed to have only two interests: Boy Scouts and base-

ball. He passed the Boy Scout tests. He had a background of farm life. The first four years of school he passed, but then seemed to become retarded, and failed twice.

Personality.—His personality was not normal. He was despondent quite often. He was moody, sometimes very happy, then again, would cry over nothing. He was not interested in things around him. He liked birds and would feed them. He seemed to have a peculiar affection for animals. This situation is often found to be a characteristic of lower mental levels. He would not sit up straight. He could not hold any position for long. His legs were always twined around things. He slid into his seat and slouched down in it. When he walked, he shuffled along, not entirely in the manner characteristic of deaf children whose vestibular senses are defective, but in a lazy fashion. When seated, his head would move from one side to the other or cock to one side, but the movements were not of alertness. He did not seem to be looking at anything. He seemed to sprawl over things and was generally awkward and inco-ordinated. He was poor in shop work, gym, drawing and writing. He had no initiative. He was babyish and liked to be petted.

Psychological.—In the psychological examination, he was found to have average intelligence. In achievement tests he was better than would be expected. In co-ordination and manipulation tests he was awkward and slow. He was emotionally unstable. He associated with companions of lower mental level or younger age, but spent much time by himself.

Physical.—In the physical examination, he was found to be shorter than average stature. His skin showed anemia. It was clammy and pudgy with no life in it. He lacked energy and had little endurance. His vision was defective so that he wore glasses. He was susceptible to respiratory diseases and demonstrated considerable absenteeism.

Medical.—The medical examination showed a diminished and insufficient thyroid secretion, and indicated the administration of an outside supply. Hypothyroid treatment was given.

Therapy.—Hypothyroid therapy improved his physical and psychological condition. He began to react normally. He became emotionally more stable. After a short time, he began to make definite progress in lip-reading, language and speech. His voice nasality diminished and his intonation improved.

Summary.—This case of *alalia cophica* was retarded as a result of mal-function of an endocrine gland. Diagnostic psychological and logopaedic rehabilitation was fruitless until after medical treatment had removed the glandular disability.

The *Schwa* and Other Indefinite Vowels in Deaf Oralism

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ALEXANDER GRAHAM BELL once said, "I shall read a few sentences from a book, substituting for each vowel sound a mere indefinite murmur of voice. . . . You observe that the articulation, though, of course, very peculiar, is perfectly intelligible. We may learn from such an experiment as this, that the consonants are much more important than the vowels. Intelligibility of speech mainly depends upon correct pronunciation of consonants. We could manage to get along very well with only one vowel sound, if indefinite enough, and yet make ourselves understood. Too much effort is made to impart a niceness of pronunciation that is not appreciated by the outside world."[1]

The above statement of Professor Bell does not appear so strange when one considers the finding in actual pronunciation of representative formal American English that 51.0 per cent of the vowels are weak and indefinite. I refer to the occurrences of the vowel sounds which can be found in such words as *put, pit, pet, senate, unconventionality* and *above.* The predominance of these vowels has led Dr. G. Oscar Russell to say, ". . . certainly the deaf should be taught to cultivate the insertion of these (indefinite) vowels . . . in their proper places, as by such means their speech becomes less conspicuously different."[2]

The understandability of Bell's reading is again the less astonishing since we have found that, also, vowel sounds occur only 38.2 per cent of the time.[3] Thus the consonants are not only more important but more frequent. And, furthermore, his speech was 81.7 per cent perfect; that is, his

[1] Bell, A. G., Mechanism of Speech, New York, 1916, p. 13.
[2] Russell, G. O., Speech and Voice, New York, 1931, p. 126.
[3] Voelker, C. H., Phonetic Distribution in Formal American Speech, *Journ. of the Acoustical Soc. of Am.*, April 1934 (vol. 5, no. 4), pp. 242-246.

pronunciation distorted only 18.3 per cent of the sounds, namely, the vowels with more typical characteristics, such as those in *father, add, all, sea, obey, ape* and *boot.*[4]

These figures are based on a study of permanent records made in the Phonetics Laboratories at the Ohio State University of more than five thousand radio announcements from radio stations throughout all parts of the United States, in which more than six hundred thousand speech sounds were pronounced in connected utterance.[5]

However, on the other hand, we must not go too far in emphasizing the unimportance of the vowel. Such workers as Sir Richard Paget[6] and Ferdinand Trendelenberg[7] have shown that the vowel has a greater carrying power than the consonant. This may be as great a difference as seventeen times. Hence it has been the experience of all of us at some time to hear only the vowel sounds in conversations at public and noisy places. Yet we understand the speech. This is partially because from experience we expect certain things to be said in given places. Thus it might be said of such experiences that the specific vowel sounds we do hear act mostly as a check upon our imagination. And secondly, the vowels become infinitely more important as a result of the fact that the speech melody occurs predominantly with the vowels and this intonation in itself is of cardinal importance in the interpretation of meaning. This applies only when we are not looking at the speaker, which position would bring up the consideration of visible speech understandability.[8]

Further evidence can be found in Harvey Fletcher's speech oscillograms which show that the consonants distort to some

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[4] *Ibid.*, The Occurrence of Sounds in Formal American English, *Le Maître Phonétique,* July-September 1934 (third series, no. 4), pp. 73-74.

[5] *Ibid.*, Technique for a Phonetic Frequency Distribution Count in American English, *Archives Neerlandaises de Phonétique Expérimentale,* 1935 (Tome XI), pp. 69-72.

[6] Paget, Sir Richard, Human Speech, London, 1930, p. 38.

[7] Trendelenberg, F., Directive Effects of the Voice, *Zeit. für Techn. Physik.,* 1929 (vol. 10), p. 558.

[8] Voelker, C. H., The Usage of Vowel Positions, ANNALS, January 1935 (vol. 80, no. 1), pp. 5-6.

———, The Occurrence of Homophenous Articulations in American Usage, ANNALS, May 1934 (vol. 79, no. 3), pp. 210-213.

extent the quality of the vowel sounds.[9] This distortion largely accounts for the distance that certain consonants in connected speech can be heard. This factor is especially evident in recorded speech, since the quality of many recording and reproducing machines and devices is such as to leave out completely or weaken many of the frequencies typical of several of the consonant phonetic elements. Thus, the understandability of such speech and especially the interpretation of such consonants results largely from the consonantal vowel distortion.

As can be seen above almost half of the vowels are strong, and important to the meaning and use of our language. Hence it is obvious that the vowels are not nonentities, which fact Bell already admitted when he said that his pronunciation of the passage described at the start of this paper was "though, of course, very peculiar" and when he further added in his discussion of the selection that we should teach the deaf "the speech of the people among whom the children live."

In the teaching of speech to the deaf, too much stress is apt to be given to strong and meticulous vowel enunciation to the neglect of carefully produced consonants. It is one of the purposes of this paper to point out that this practice already often mentioned is additionally pedagogically unsound because in connected utterance there is a considerable predominance of consonants over all the various types of vowels added together.[10] And it is the primary object of this paper to indicate that great attention should be given to the teaching of the very indefiniteness of certain common vowel positions because they make up a considerable portion of the natural quality of speech[11] and are furthermore dispersed even more abundantly in our language than the strong vowels themselves.

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[9] Fletcher, H., Speech and Hearing. New York, 1929, pp. 33-49.

[10] Voelker, C. H., The Phonetic Difference between Formal and Colloquial English, *Quarterly Journal of Speech* (Forum), June 1935 (vol. 21, no. 3), pp. 410-411.

———, A New Sound Count for the Oral Curriculum, *Volta Review*, March 1935 (vol. 37, no. 3), pp. 155-156.

[11] *Ibid.*, A New Sound Count for Logopaedists, *Annals of Otology, Rhinology and Laryngology*, March 1935 (vol. 44, no. 1), pp. 260-263.

A Proposed Standard Application Blank for Admission of Pupils to Schools for the Deaf

I. S. F.

AMERICAN schools for the deaf differ widely in their management and practice, despite the fact that they have generally the same admixture of children as to age, age when they are admitted, cause of deafness, degree of residual hearing, parentage, and other life variables. But in no respect do these schools differ more than in the information they request concerning a child before he is admitted as a pupil.

According to the statistics given in the ANNALS for this past January, there were 20,769 children enrolled in the 218 schools for the deaf in the United States and Canada at the beginning of the school year 1936-1937. It might serve many values if there were available for scientific study a uniform body of information concerning these children.

The information which each of our state and residential schools for the deaf requires before it will enroll a pupil is sought mainly to determine whether he appropriately belongs in such a school and also whether he can reasonably be expected to profit by the instruction it offers. This information is usually obtained from the parents or legal guardian by written answers to a set of formal questions in the nature of an application blank for admission of the child. Our schools vary greatly as to the number of questions they ask on this application blank and as to the nature and completeness of the information they wish. Some schools wish to know many details about a child, his past history, his family background, his health, and his mental condition, while others are content with obtaining a few broad suggestions concerning him. Apparently the schools do not stress with equal importance the office records which they wish to maintain concerning their pupilage.

It may be of practical value if all the schools were to adopt a standard form of application blank which would include at least a basic body of information. This would make possible

the gathering of the same type of facts, and it is such facts, if made available to the techniques of research method, that could yield further comparative data to shed light on the subject of deafness and the deviations resulting from it in children.

A study to determine the possibility of drawing up such a standard question form for use in schools for the deaf was recently undertaken at Gallaudet College, with National Youth Administration aid. It was decided to obtain for analysis the application blanks employed by the public residential schools of the United States and Canada. The total number of such schools was 72, including the school in Hawaii. The completeness of the material received may be judged from the fact that 68 of these schools sent a copy of their blanks. This means the analysis is based on practically 95 per cent of the forms in use in schools which have enrolled some four fifths of the total school population of deaf children.[1]

The number of questions asked on each blank was carefully noted, and the following distribution obtained:

TABLE I

Number of Questions Asked	*Number of Schools*
10-19	5
20-29	16
30-39	18
40-49	13
50-59	8
60-69	1
70-79	1
80-89	3
90-99	0
100-109	0
110-119	1
120-129	1
130-139	0
140-149	1
Total	68

The great divergence in the number of questions asked is at once apparent, the actual extremes being 14 questions

[1] The compilation and classification of the facts obtained from the collected blanks were carried out by Mr. Gorden Hirschy, a student in the Senior Class at Gallaudet College. The painstaking care which he gave to the preparation of the material is gratefully acknowledged.

for one school as against 148 at the other end. What can be the reasons that compel one school to ask almost 150 questions, while another is satisfied with only 14? Is a school which asks 150 questions inquiring into the life of a child too minutely for the convenience of its office records, and can a school which sets only fourteen questions obtain sufficient knowledge about a prospective pupil?

We may note that only eight schools, or a little more than a tenth of the total, ask more than 60 questions, from which we may infer the general tendency lies below that. The median practice apparently is to ask between 30 and 39 questions.

But the data disclosed that many of the questions were broken up into numerous sub-categories. Further, what were simply sub-items for some schools were considered important enough to be listed as separate major questions by other schools. For this reason, it was thought advisable to make a separate tabulation of the application forms to determine the total number of items asked, that is, the total amount of all information requested concerning prospective pupils. The result was this distribution:

TABLE II

Number of Items Asked	*Number of Schools*
20-29	7
30-39	12
40-49	8
50-59	11
60-69	12
70-79	6
80-89	3
90-99	3
100-109	1
110-119	1
120-129	1
130-139	1
...	
...	
...	
200-209	1
...	
...	
...	
330-339	1
Total	68

Study of Table II indicates again a striking extreme between the two ends; the actual divergence being 23 questions for the lowest number asked by any one school to 336 for the highest. Again is the inquiry raised, Why is one school satisfied with only 23 items of information concerning an applicant for admission, while another requests fifteen times that number?

Only six schools, or approximately one eleventh of the total sending blanks, list more than 100 items on their blanks.

As the median number lies between 50 and 59 items, it may be practical to set that quantity as an acceptable standard in making up a representative application form.

A study of the individual blanks revealed that although a grand total of 428 separate items appeared on all of them combined, certain points recur with varying frequency. A distribution of the frequencies was prepared, which made it possible to assemble for a theoretical standard application blank for use in schools for the deaf those 60 questions most frequently asked. This number was chosen since that appears to be the limit of the class of items for the median number of schools.

A list of the questions, from one to 60, will therefore indicate the type of information most commonly desired by residential schools concerning children for whom admission is sought. These questions, stated as nearly as possible as they appear on the specimen application blanks, and arranged in approximately homogeneous order, are as follows, the figure in parentheses in each case indicating the number of schools asking the question:

1. Give name of the child in full. (68)
2. What is the exact date of birth of the child? (68)
3. What is the place of birth of the child? (63)
4. What is the child's nationality and color? (23)
5. Was the child born deaf? (50)
6. If the child was not born deaf, what was the cause of deafness? (68)
7. At what age did deafness occur? (68)
8. Is the child's deafness total or partial? (59)
9. Have efforts been made to cure the deafness? (28)
10. What kind of sounds can the child hear—human voice or other sounds? (28)

11. Can the child speak any words? (41)
12. Does the child understand spoken language from the lips of another person? (37)
13. What is the child's general state of health? (39)
14. Has the child been successfully vaccinated? (56)
15. When? (22)
16. What is the condition of the child's eyesight? (31)
17. Has the child had whooping cough? (60)
18. Scarlet fever? (58)
19. Measles? (58)
20. Mumps? (56)
21. Smallpox? (42)
22. Diphtheria? (28)
23. Chickenpox? (26)
24. Other diseases? (30)
25. Does the child have epilepsy, chorea, or fits? (21)
26. Does the child have any acute or chronic skin disease? (23)
27. Can the child care for himself in a general way, by dressing and undressing himself, by taking care of himself at the table and by satisfying the calls of nature without help? (33)
28. What has been the general moral conduct and disposition of the child? (25)
29. Is the child mentally normal? (22)
30. Has the child learned to perform any kind of useful work? (22)
31. Has the child been under instruction in a public school or institution? (56)
32. If so, where, when and how long? (47)
33. Can the child write? (20)
34. Give full name of father. (63)
35. Is the father living? (21)
36. If the father is living, what is his present address? (26)
37. What was the father's birthplace? (40)
38. What is the father's occupation? (60)
39. Does the father have, or did he have, deaf parents or other deaf relatives? (23)
40. Give full maiden name of mother. (50)
41. Is the mother living? (21)
42. What was her birthplace? (43)
43. What is her occupation? (35)
44. Does the mother have, or did she have, deaf parents or other deaf relatives? (24)
45. Were the child's parents cousins or otherwise related before marriage? (63)
46. How many children have the parents had? (32)
47. Give the names of children born deaf. (22)
48. Give the names of children who became deaf through sickness or accident. (22)
49. Has the child any deaf relatives? (30)
50. What is the residence of the child? (34)
51. What is the nearest railroad station? (21)
52. What is the child's post office address? (33)
53. What is your church preference? (29)
54. Remarks. (31)
55. If the child is not with his parents, with whom is he? (20)
56. Date of application. (36)
57. Agreement that the child is to remain at school except during vacation or holidays. (22)

58. Signature of person filling out the application blank. (31)
59. Affidavit, attesting before notary to the truth of statements in the application, required. (28) Affidavit without notary. (24)
60. Admitted (date). (24)

Classification of these 60 questions yields the following types of information concerning the child:

Questions	*Information*	*Number of Questions*
1-4	Identification of the child	4
5-10	Facts concerning his deafness	6
11-12	The child's speech	2
13-26	Health and physical condition of the child	14
27-33	General ability and disposition of the child	7
34-49	Parents and facts concerning deafness in family	16
50-52	Residence	3
53-60	Miscellaneous	8

The greatest emphasis—with more than one fourth of all the questions—appears to be on information concerning the parents and deafness in the family. But many of the questions in this group are repeated, that is, one set concerning the father and a corresponding set for the mother. The health and physical condition of the child seems to be the next important consideration, fourteen of such questions being asked.

In conclusion, it is reasonable to assume that a form which includes at least the sixty items listed above as representative of the practice in residential schools should permit a school to obtain a well-rounded case-history of children who may be admitted as pupils.

Agricultural Training for the Deaf

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THIS EFFORT is not to justify agriculture as a suitable occupation for the deaf, but rather an attempt to set up a method of teaching farming in a residential school. Of course such a plan is primarily for a state which is largely agricultural.

We cannot blame deaf boys for disliking "the farm." The work may be drudgery and the weather may be bad. There may be dirt in their eyes, muck under their feet, poisonous dust down their backs, and there may be actual suffering from exposure.

It may be that a boy must wear his school shoes to the barn. (I have known boys to wear their best suits to the farm.) A school sweater may become so full of beards or the smell of the barn that the owner cannot wear it to school. A farm boy cannot help but compare his lot with the neatly dressed boys who work in attractive and comfortable shops.

He would not mind the dirt and discomfort so much if all the boys were subject to them, but he does dislike, for instance, to go to dinner with the other children, where he comes in contact with the girls, without an opportunity for a bath and a change of clothes. Of course, the boys from the other shops would make comments.

Because our farm instruction has been weak, we have very often sent only under-privileged boys to the farm—those left over from assignments to other occupations. Naturally these boys sense degradation and seek to escape it.

But the worst objection of all is that the boys know that they are working hard in unpleasant circumstances but are learning nothing, and will not profit in any way by such work after learning it.

This condition exists because of the inadequate set-up for agricultural training. It is impossible for the school farmer to do any teaching with from six to twenty boys for only two or three hours at a time. Farm work varies so much that he cannot place so many at constructive employment

at the same time, and for such a short period. The result has been that most boys have spent their farm experience at hand labor, such as raking leaves, cutting wood, digging ditches, etc., from which they got no profit after quickly learning the simple task.

It is apparent that such a program is worse than none at all in that it defeats its own purpose. It calls to the attention of deaf boys the drawbacks of the farm without making manifest any of its advantages, causing them to be more and more dissatisfied with their farm home life.

Evidently something must be done to popularize a farm program, particularly for the boys. The first step is providing suitable and comfortable clothing for the boys on the school farm. Being well dressed does not necessarily mean being dressed up. A man feels as well dressed in good clean work clothes suitable for the job at hand as he does in a tuxedo; a deaf boy wading around a barn on a wet morning would feel as well dressed in rain hat, slicker, and boots as the superintendent would feel in his business suit.

A school that works a large group of boys to its, and their, advantage can well afford to lay in a supply of rubber boots, work shoes, gloves and mittens, warm work coats, raincoats, overalls, and coveralls. Of course the boys would soon begin to accumulate these articles of clothing, but there should always be provision for the boys until they get their own and for those who are unable to supply themselves. Provided with sufficient clothing of an attractive nature, a dirty job on a bad day may be turned into an adventure, a conquest of the elements.

Continuing plans for a more popular attitude toward the farm, what man or boy does not get a tremendous lift from pulling the lines over a finely stepping team? If the team is well groomed, the harness of an attractive, though not ornate, style, and the wagon new or freshly painted, the pleasing effect is much more striking.

Farm activities are especially attractive to young deaf boys who have not yet become closely associated with any particular trade. The farm offers outlets for the imitation of men and the consummation of the desire to do men's work.

Also, by starting the farm program with young boys the pupils would get past the more simple tasks before they might feel to be above them, and in their early teens would arrive at tasks that would be considered by all the boys as worthy of accomplishment. And surely a tractor or a truck can be as fascinating as a press or a planer.

On hard manual labor, a light lunch served on the job between meals is often a lifesaver, particularly for the growing boys. A school that uses the services of its youngsters to advantage while they are learning can easily afford the refreshments to carry out the popularity idea.

Another opportunity would be to have the farm boys eat in a separate place—good farm meals prepared by the girls —better meals than they would ordinarily have, with hot and cold drinks according to the weather, and good desserts. This would bring home to the pupils in the most effective way one of the greatest advantages of farm life.

But whatever we may do, if we make the farm a place where the boys can really learn the things so essential to a farmer or farm laborer, it will not be unpopular with the majority. The average deaf boy wants to learn, especially along lines that minimize his handicap.

In this connection I shall always remember the case of the boy in one residential school who was eventually not allowed to return because of repeated trouble with his teacher. Upon one occasion, in exasperation at her fussiness, by speech and natural gestures he tried to say, "I don't want to do that! I want to plow and drive a mule!"

To provide for this set-up, one must consider equipment —not extensive, but practical and sufficient.

For the girls I would like a furnished house separate from the school except for heat, water, and light. It should be a large house, remembering that its purpose is to provide practice in housekeeping for a large group of girls. It should be as much like the better farm homes of the state as possible. Eventually it should have its own lawn, shrubbery, flowers, and a small vegetable garden in the back. There should be a rock garden, or a lily pool. The interior should be exactly like that of a well furnished farm home except

that it should have a large sewing room and a large kitchen. The kitchen should contain a stove of each type, and both an ice box and an electric refrigerator.

For the boys I would have a big farm with every type of agriculture possible on it—all kinds of crops grown in that section, all kinds of fruit and berries, a fine garden, dairy, beef cattle, sheep, goats, geese, ducks, turkeys, and poultry, rabbits, and bees on a commercial scale, the last three for girls as well as boys. For teams and machinery I would have the very best that the school could afford. By the work of the boys during the winter months and on rainy days I would keep all equipment in "jam-up" shape as an example for future deaf farmers and as a model for the community. Good equipment also helps along the popularity motive.

In connection with the barn or in some other farm building, there should be a large schoolroom with full equipment, including visual aids. There should also be plenty of shelf, cabinet, and locker space.[1]

The size of the outlay should depend upon the number of boys to receive farm instruction under the plan explained later on. For example, if I planned to keep six boys on the farm all the time, I should then plan for an outlay that would require the work of six farm hands. But I should not have more than one hand, and he should be an assistant instructor. The boys should be the hands, as they would learn by doing.

It seems to be futile to attempt to determine in the usual way, or any other way, which boys shall study farming as we choose which ones shall take printing, etc. The boys are strongly prejudiced in the first place. They have not been unaware of the stigma placed on farm boys and the disadvantages before mentioned. They have had enough of the farm at home and they want something new. They also realize that city life is a happier one for them. So in their minds the farm is the last resort. And the exceptional boy

[1] The writer has discussed this matter so often with Mr. John L. Caple, principal of the vocational department in the Georgia School, that he cannot identify all of his contributions to it. It would not be the same without the benefit of his criticisms and suggestions, and an expression of appreciation to him is here acknowledged.

who may have judgment enough to realize that the farm is the best place for him may be the one who would be outstanding in a trade.

This is only a fraction of the special problem in an agricultural state. Most of the children come from the farm. Our attempts to teach farming prejudice the pupils against the occupation of their parents. We teach the boys printing, shoe repairing, carpentry, photo engraving, etc. These trades are *excellent for the deaf if they can get jobs and hold them;* if and when they cannot, they find themselves back on the farm little better qualified to make a living and more dissatisfied than if they had not gone to school, with their vocational education largely wasted.

The answer is that we must do both—give our boys and girls the best chance we can for an urban vocation but also give them a popular agricultural training upon which they can fall back in case they cannot get jobs, cannot hold them, or are laid off.

It has here been pointed out that general farming instruction for only a short time daily is ineffective, though such a period may be satisfactory for industrial states where the emphasis is on dairy, poultry, and truck gardening. It seems to me that a half day would be more effective, and such a schedule might be worked out, but I think a whole day at a time would be better. This plan has been in use at Berry Schools for a number of years and has proved successful. Fortunately, such a plan fits into a suggested change of the residential school week.

Many have suggested that the residential school weekly schedule needs to be changed. For many children the weekend extends from Friday noon to Monday morning, which is too long. Also, where children spend long hours in academic and vocational departments and have their other time pretty well taken up with work and activities, the stretch from Monday morning through Friday may be too long without a slight break. According to this plan, most intermediate and advanced classes would follow a six-day schedule, one day being devoted to agriculture and allied subjects. Not to deprive the children of too much of their leisure, and yet make it more profitable for them, I would

close everything at about three-thirty Wednesday and Saturday afternoons, giving opportunity for athletic events and other school activities at that time.

On top, or underneath, the regular rotating schedule of the intermediate and advanced departments I would arrange a farm schedule for both the boys and the girls, including twelve-year-olds. Each day a group of the boys and girls would go to the farm for the day, the boys to do the work of hired hands and the girls to get the boys' and their own breakfast and dinner, clean up the house, look after the shrubbery, flowers, and garden, work off units in cooking, canning, and sewing, and do the school mending. (Boys should be taught to do their own simple mending, such as darning socks.)

All the work for both the boys and girls should be on a unit basis leading from the most simple farm and home task, such as chopping, sawing, and splitting wood, washing dishes, and scrubbing, to the most difficult, such as caponizing, horseshoeing, driving a tractor, making pastry, canning corn, and planning and preparing a meal for guests. These units, arranged in their order of difficulty, should be handled like the units of a successful vocational department, such as the one for girls at the New Jersey School and like the advancement requirements and tests of a Boy Scout program. Of course each pupil should be allowed and encouraged to go as fast as possible and when he has finished the course he should be excused from his day on the farm.

As part of the schoolroom equipment at the farm there should be a library with at least one file for each unit, or part of a unit. While preparing for the passing of a unit, a boy might find there a book, a picture, a government bulletin, or a reference to an educational film. No doubt the boy would take steps to have that film soon shown.

This is how it would work:

At the close of school on a certain day the teacher and the class would understand that they would not meet in the schoolroom on the morrow. For the teacher it would be her Saturday; for the pupils it would be their day on the farm.

The day would begin with an early rising and a trouping to the farm. The boys would do chores, after which the girls

would have breakfast ready. Possibly one girl would make the coffee, one prepare the eggs, another the ham, and another the toast, or possibly it all would be the work of two girls, or one girl, depending upon their units.

Breakfast over, the farmer is ready for his hands, with plans made. For instance, he knows that the work of killing and dressing of a hog is divided into three units—to help and observe, to do the work under supervision, and to supervise and be responsible for a good job. He has saved this hog-killing for this class so that each one of three boys can work off a unit on one job. The one responsible is full of importance as he gets his directions as to the identity of the hog, care with the gun, care not to set the hair, and to be sure to be clean. The farmer then turns to the other boys, one to do a job with the team and wagon, another to plow, another to hoe, others to bale hay, etc., each according to his ability as expressed in units satisfactorily completed.

Let us suppose it is a winter day. Each boy is learning that there is always something to do on a well-managed farm, even in the slack season. I see them making repairs on the farm buildings, fences, and gates; fixing, cleaning and oiling harness; repairing and painting all farm machinery; making additional equipment; or overhauling the farm tractor or truck, probably with the aid of the maintenance department. The school should provide instruction in horseshoeing, simple blacksmithing, and automobile repairing and driving during the winter. There are also the regular farm winter jobs, such as husking corn, baling hay, and getting up a year's supply of wood.

It seems that there is always a lack of lumber in a school for the deaf, probably because it is an expensive item. Why could not the school buy standing timber and let the boys have the experience of getting it out? The novice has no conception of the possibilities of practical instruction in the cutting of a tree so that it will fall a certain way, cutting it up, the loading of the logs, and getting a heavy load out to the road over a rough, and often steep and soft trail. The logs could also be sawed at the school sawmill.

Such work is more or less dangerous, but we must teach our boys how to practise safety first under all such circum-

stances, for the farmer and farm laborer surely must work occasionally under such dangerous conditions "in the world."

It should be kept in mind that this program includes children twelve years old, and also grown deaf men and women. Only young children would be working on the simple tasks whereas grown pupils would be doing the more difficult, technical, and sometimes hazardous work.

As the girls go about setting the farm home in order, many of the girls can continue work on their units, whatever they be. There may be some milk, cream or fruit, left over that must be saved, vegetables to be canned in glass or tin, dinner to prepare for the boys, and possibly refreshments for a party to plan and prepare.

In the evening I see the class going back to its regular routine full of the events of the sixth school day and refreshed for the remaining days of the regular five-day academic and vocational week.

Under this plan many of the burdens of institution officers could be turned to good experience and learning by the right pupil or pupils. The farmhouse would serve as an excellent place for small parties and the pupils should have experience in giving them in the nearest approach to a home. The girls' classes should always provide and plan for lunches and supplies for Boy Scout activities and provide extra meals when necessary. What better experience could be provided for a girl than for her to be told in the evening that the superintendent is catching an early train, that he will be at the farmhouse at a certain time for breakfast, and what time would she like to be called?

One element omitted so far is the personal ownership by the pupils of pigs, a small number of chickens, rabbits, etc. Surely the experience of other schools can be useful in this regard. If no more, the attention of the pupils should be repeatedly called to the fact that personal ownership is a relief from drudgery, and that the hired man often looks at his watch while the owner or renter looks to the accomplishment of the job.

For farm language, there should be a requirement for every unit. At the close of each day's work each pupil should write in a sentence or two, what he has done that day. Of

course, if he has done many things he mentions only one or two. The instructor checks for facts and sees that there is enough there so that the academic teacher can make it out. If it is not there he supplies it, but does not correct the language. In due time the attempts at farm language reach the academic teachers of language.

This program takes it for granted that the deaf boy and deaf girl will marry. If the boy does not, he may be better off, but not the country girl. Many deaf girls go from their graduation exercises back to the farm to stay there for the rest of their lives without an opportunity to earn a livelihood for themselves.

That is the reason I suggest that girls have an opportunity to learn something of the commercial side of raising and keeping poultry, bees, and rabbits. (Care should be taken that each girl leaving school is equipped to make pin money at some kind of art or craft, and that she knows where and how to order her supplies.)

I have known farm boys being prohibited from driving the farm team for fear of a run-away or driving the school truck for fear of a smash-up. I have known a farmer, on his own farm, to spend most of a day in the field with a "green" hand for fear that he would have trouble or do a poor job. When the school farmer can have his boys for a longer period, he will have an opportunity to give boys on new jobs close supervision and then they will learn properly.

In an agricultural state boys will eventually learn part of this program at home, but not much of it. The normal farm hand who "can do anything" is rare indeed, and certainly our deaf boys who have been reared on farms are not prepared to do many farm operations. Unfortunately the farmer-father seldom makes strict demands upon the time of his deaf son, especially if there are other boys at home. The boy is allowed to do as he pleases and the father may be doubtful of his ability to do skilled jobs. He cannot teach his deaf son as he can the others and the deaf boy loses an incredible amount of information that other farm boys pick up from casual conversation. There is a wonderful opportunity for cooperation between the farmer-father and the farm department of the school.

The most obvious evidence of the failure of our present system is apparent when a deaf graduate fails to get a job and settles back on his parents for life. He may even add a wife and children to the burden.

With agricultural training in addition to trade preparation school people and placement officers can tell deaf graduates that if they cannot get a job right away their families can help them "buy a mule and rent a crop" or otherwise try to make themselves self supporting by agriculture, meanwhile seeking a job at their trades.

I have treated this subject primarily for the school in an agricultural state, but I am convinced that a modified form of this program, with emphasis on dairy, poultry, and trucking could be used to advantage by schools in industrial states.

Under circumstances as they have been for the past few years, many people have had to get along as best they could. "Anyone can farm" is a fallacy but anyone can learn to grow a good garden, preserve fruits and vegetables, milk a cow, and grow feed for a cow and pigs. An interesting article entitled "Half an Acre and Independence" in the December 12, 1935, issue of the *Minnesota Companion* carries out this thought.

In conclusion I quote from "A Survey of the Vocational Work of the Deaf of West Virginia," reported in the *West Virginia Tablet,* May, 1935, by Mr. C. H. McAlister, principal of the vocational department of the West Virginia School:

> In the suggested trades it is surprising to note that agriculture ranks first, . . .
>
> Many of the deaf gave the following reasons for suggesting agriculture: "Each deaf person working for someone or running a small business should have a plot of ground on which he could live and raise most of his food, and it would afford a place to work when work shuts down or business is slack."

Lessons in English—VI[1]

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PECULIAR EXPRESSIONS

With . . . without . . . (If . . . had no . . .)

I see with my eyes. I could not see without eyes.
I could not see if I had no eyes.
You work with your hands. You could not work without hands.
You could not work if you had no hands.
We walk with our feet. We could not walk without feet.
We could not walk if we had no feet.
A bird flies with its wings. A bird could not fly without wings.
It could not fly if it had no wings.
A fish swims with its fins. A fish could not swim without fins.
It could not swim if it had no fins.
The pupils write with their pencils. They could not write without pencils.
They could not write if they had no pencils.
A man makes things with tools. He could not make them without tools.
He could not make them if he had no tools.
A cripple walks with crutches. He could not walk without crutches.
He could not walk if he had no crutches.

Questions

With what do you see? I see with my eyes.
Could you see without eyes? No, I could not see without eyes.
With what does a man make things? With tools.
Could he make them without tools? No, he could not.

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[1] Continued from the ANNALS for September, 1932 (vol. lxxvii, no. 4), pp. 335-342. The previous section gave practice material for language drill work in Common Expressions.

For want of . . . because . . . had no

The boy could not write for want of a pencil.
He could not write because he had no pencil.
The old man could not read without glasses.
He could not read because he had no glasses.
John could not buy a new hat for want of money.
He could not buy a new cap because he had no money.
Mary could not go to church for want of new shoes.
She could not go to church because she had no shoes.
The woman could not bake bread for want of flour.
She could not bake bread because she had no flour.

Needs to be . . . in need of . . . wants to be

Your pencil needs to be sharpened. It is in need of sharpening.
John's hair needs to be cut. It is in need of cutting.
James' shoes need to be mended. They are in need of mending.
Mary's nails need to be pared. They want to be pared.
The windows need to be cleaned. They need cleaning badly.
This room needs to be aired. It is badly in need of airing.
The clock needs to be wound up. It wants to be wound up.
The cows need to be fed. They are in need of feeding.
The flowers need to be watered. They are in need of being watered.
Does your pencil need to be sharpened? Is it in need of sharpening?

On account of . . . because of

We could not go out for a walk on account of the rain.
We could not go out for a walk because of the rain.
James went home on account of his father's death.
He went home because of his father's death.
Harry had to leave school on account of his health.
He had to leave school because of his health.
Mary had to go to the doctor on account of her eyes.
She had to go to the doctor because her eyes were sore.
Willie could not go to church on account of having a cold.
The men could not row the boat on account of the storm.
The man could not find his way on account of the darkness.

The little boy was crying on account of losing his money.
The children were frightened on account of the thunder.
I cannot hear what you say on account of the noise.
Why could we not go out for a walk? On account of the rain.

Before . . . after

We get up before we put on our clothes.
We put on our clothes after we get up.
We wash our faces before we dress ourselves.
We dress ourselves after we wash our faces.
We get our breakfast before we come into school.
We come into school after we get our breakfast.
The girls set the tables before we get our meals.
They clear the tables after we get our meals.
The man cleans the horse before he puts on the harness.
He puts on the harness after he cleans the horse.
The woman washes the clothes before she irons them.
She irons the clothes after she washes them.
Does she iron the clothes before she washes them?

As soon as . . . no sooner . . . than

We put on our clothes as soon as we get up.
As soon as we get up, we put on our clothes.
We sit down in our seats as soon as we come into school.
As soon as we come into school, we sit down in our seats.
As soon as the man came into the house, he took off his coat.
He took off his coat as soon as he came into the house.
As soon as it began to rain, the woman put up her umbrella.
No sooner did it begin to rain, than the woman put up her umbrella.
The girl ran to the door as soon as she heard the bell.
No sooner had she heard the bell, than she ran to the door.
As soon as we got home, it began to rain.
No sooner had we got home, than it began to rain.
We go out to play as soon as we get our dinner.
As soon as the boy saw his mother, he ran to meet her.
No sooner had the boy seen his mother, than he ran to meet her.

Although . . . but

It was raining but the man did not put up his umbrella.
Although it was raining, the man did not put up his umbrella.
The man did not put up his umbrella although it was raining.
You told John not to open the window but he did so.
John opened the window although you told him not to do so.
The doctor told Mary to stay in bed but she did not do so.
Although the doctor told Mary to stay in bed, she did not do so.
The man had a bad cold but he went to his work.
The man went to his work although he had a bad cold.
Although the boy was quite well, he did not go to school.
The boy did not go to school although he was quite well.
The boy was quite well but he did not go to school.
Willie was very tired but he would not go to bed.
Willie would not go to bed although he was very tired.
Jane's hands were quite cold but she would not put on her gloves.
Jane would not put on her gloves although her hands were quite cold.

On . . . ing

On coming into school I found a letter on my desk.
I found a letter on my desk on coming into school.
On opening his letter the boy found a postal order inside of it.
On hearing a noise the dog began to bark.
The dog began to bark on hearing a noise.
On seeing her father the girl ran to meet him.
On looking out of the window we saw a funeral passing.
On going into the room the boy took off his cap.
The boy took off his cap on going into the room.
On finishing their dinner the boys went out to play.
On putting out the light the children got into bed.
On getting up out of bed we saw the snow on the roofs.
On coming downstairs the woman slipped and fell.

As . . . when . . . while

As the woman was coming down stairs, she slipped and fell.
The woman fell and sprained her ankle when coming downstairs.
As the boy was going along the road, he met a man riding a horse.
As I was eating my porridge, a fly fell into it.
A fly fell into my porridge when I was eating it.
As the man was shaving, he cut himself.
The man cut himself while he was shaving.
As Jack was chewing his meat, he bit his tongue.
Jack bit his tongue while chewing his meat.
As Jane was coming into school, she dropped her handkerchief.
As the girl was filling the lamp, she spilled the oil.
As the boy was climbing the tree, he fell and broke his arm.
The boy fell and broke his arm when he was climbing the tree.

Wish (requiring the past tense)

I wish I had a watch.
I wish I had a new suit.
I wish I were a boy. (girl)
I wish I could hear.
I wish I could drive a motor.
I wish I could play chess.
I wish it would stop raining.
I wish you would stop laughing.
I wish you would stop teasing me.
I wish you would stop making a noise.
I wish you would stop shaking the desk.
I wish you would go away and leave me alone.
I wish I had a bicycle.
I wish I had my photo taken.
I wish I were as tall as you.
I wish I were a girl. (boy)
I wish I could swim.
I wish I could dance.
I wish I could play hockey.
I wish the sun would come out.
I wish you would stop playing.

This and these (near) . . . that and those (distant)

Whose book is this? That is your book.
Whose pencil is that? That is John's pencil.
Whose gloves are these? Those are my gloves.

Whose glasses are those? These are Mary's glasses.
To whom does this knife belong? That knife belongs to James.
To whom does that watch belong? This watch belongs to Ella.
To whom do these keys belong? Those keys belong to you.
To whom do those boots belong? These boots belong to Fred.
Does this pen belong to you? No, that pen belongs to Robert.
Do these glasses belong to Mary? Yes, those are Mary's glasses.
Does this pen belong to Eddie? No, this pen belongs to Robert.
Do these glasses belong to me? No, these glasses belong to Mary.

One of . . . my other . . . both . . . neither of

One of my hands	my other hand	both my hands	neither of my hands
One of your eyes	your other eye	both your eyes	neither of your eyes
One of his ears	his other ear	both his ears	neither of his ears
One of her arms	her other arm	both her arms	neither of her arms
One of my feet	my other foot	both my feet	neither of my feet
One of your legs	your other leg	both your legs	neither of your legs
One of the boys	the other boy	both the boys	neither of the boys
One of the men	the other man	both of the men	neither of the men

Phrases of time

Yesterday	to-day	to-morrow	the day before yesterday
Last night	to-night	to-morrow night	the night before last

Last week	this week	next week	the week before last
Last month	this month	next month	the month before last
Last year	this year	next year	the year before last
Last Xmas	this Xmas	next Xmas	the Xmas before last
Last Sunday	this Sunday	next Sunday	the Sunday before last

Every hour	hour by hour	hour after hour	from hour to hour	hourly
Every day	day by day	day after day	from day to day	daily
Every week	week by week	week after week	from week to week	weekly
Every month	month by month	month after month	from month to month	monthly
Every year	year by year	year after year	from year to year	yearly
Every Xmas	Xmas by Xmas	Xmas after Xmas	from Xmas to Xmas	

A few minutes ago	in a few minutes	for a few minutes
A few hours ago	in a few hours	for a few hours
A few days ago	in a few days	for a few days
A few weeks ago	in a few weeks	for a few weeks
A few months ago	in a few months	for a few months
A few years ago	in a few years	for a few years

Quantities of things

A cup of milk, a cup of tea, a cup of coffee, a cup of water.

A glass of milk, a glass of water, a glass of beer, a glass of wine.

A bowl of sugar, a bowl of water, a bowl of broth, a bowl of cream.

A spoonful of sugar, a spoonful of medicine, a spoonful of syrup.
A handful of meal, a handful of salt, a handful of money.
A mouthful of water, a mouthful of bread, a mouthful of sugar.
An armful of hay, an armful of clothes, an armful of sticks.
A barrel of apples, a barrel of flour, a barrel of potatoes.
A bag of oats, a bag of flour, a bag of meal, a bag of bran.
A load of coal, a load of stones, a load of straw, a load of timber.
A basket of eggs, a basket of tomatoes, a basket of groceries.
A bottle of ink, a bottle of medicine, a bottle of vinegar.
A plate of soup, a plate of porridge, a plate of rice.
A pot of jam, a pot of honey, a pot of jelly.
A can of peaches, a can of tomatoes, a can of peas, a can of syrup.
A jar of ink, a jar of oil, a jar of vinegar, a jar of whisky.
A box of pencils, a box of matches, a box of oranges, a box of sweets.
A dozen eggs, a dozen oranges, a dozen bananas.
A pound of bacon, a pound of butter, a pound of meat, a pound of lard.
A pint of milk, a pint of water, a pint of beer, a pint of oil.
A flock of birds, a flock of sheep, a flock of geese, a flock of crows.
A bunch of grapes, a bunch of bananas, a bunch of flowers.

The Place of the Supervisor in the Work of the School

By MARY SCOTT BASS
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THE IMPORTANCE of the supervisor's duties in helping with the general educational program for deaf children is not so readily recognized. Yet these duties in the well managed school are perhaps as vital in developing a well rounded personality in our pupils as is the work of the academic or vocational departments.

Careful study over more than ten years of service in the capacity of supervisor has convinced the writer that certain specific elements in this work are essential to a successful child-development program outside of the classroom. These will be taken up in the following order.

Foremost is the element of co-operation among those who must deal with the children. When this sort of spirit is there, the work is accomplished smoothly, each one has confidence in his or her co-worker, and above all the spirit seems imperceptibly to be communicated to the children. Even more than the efficiency in discharging one's duties, the great value of this co-operation is the example it sets the children.

Another item of vast importance is the need of ever bearing in mind that we are here to promote the welfare of our pupils. In this respect the supervisor has as significant a responsibility as anyone else in the school. It is in this interest our time and energy are devoted.

As honesty should form one of the fundamental traits of character, we should strive hard to teach it in all things, in both play and work. The children should be taught to claim and keep only those things that really belong to them and to return all lost articles to their owners. The "honor rule" is something to keep before our pupils, as a constant reminder that honesty at home, in the classroom, and in life in general is a very important thing.

It is hard for many children to tell the truth when they know it will mean punishment to them. We should strive to

instill in our girls the principle that even though they may be punished when they have done wrong, it is more honorable to confess it than to try to cover it up. We should tell them, too, that it is easy to tell a falsehood but that it is easier to be truthful when one once gets into the habit of doing so.

Our children should be taught appreciation. It should be our aim to teach them the importance of developing into fine young women who will be appreciated by their parents and friends in the various communities in which they live. They should be taught to respect their school, the school property and their personal things as well as the property of their associates.

A word might be said about personal care. This is quite an important subject and one which demands a great deal of our attention. Our girls should be taught what it means to them to be tidy and always attractively and neatly dressed. They should be taught daily habits which play an important part in health. There are certain routine schedules each child has to follow daily and our girls should be encouraged in all these good habits.

It is best that each child be given a locker in which to keep her personal property and once each week to have a thorough house cleaning. All personal property, lockers and rooms should be cleaned more often.

Thrift is connected with all phases of school life. Our girls should be taught to spend their money wisely. Economy is an important principle to inculcate. Some of our girls keep expense accounts. On Saturdays, they go shopping. They learn to handle money and to purchase according to their means. After having carefully calculated their expenditures, they learn the true value of things. Thus experience is the best teacher. Before buying a dress, the girls are taught to select a pattern, study the kind, quality and quantity of material and trimming, and count up the cost of the dress. At times some of the girls have asked us to help them buy their dresses. They would probably like to get silk dresses like those they had seen some of the teachers wearing. We would ask them how much money their parents would allow them for them. There was seldom any need for us to explain

to them how out of the question the whole thing was. They quickly saw for themselves. It would be clear that three yards of goods at $2.50 per yard would be more than they could afford, and they would finally admit it.

The following incident will give an idea of the results of some of our work. One of our girls earned $5.00. With this she bought material and made herself a dress, her little sister a dress, and her little brother some rompers. The statement is given in the following:

Mary's Dress

1 pattern	.45
3 yards organdie @ 49c	1.47
1 yard organdie @ 35c	.35
1 spool of thread	.05
	$2.32

Mary's Sister's Dress

1 pattern	.35
3 yards voile @ 25c	.75
2 spools of thread	.10
	$1.20

Her Brother's Rompers

1 pattern	.25
1½ yards broadcloth	.48
1 yard gingham	.25
1 spool of thread	.05
1 transfer	.25
	$1.28

$2.32		
$1.20	$5.00	Amt.
$1.28	$4.80	
$4.80 Spent	.20	Bal.

This girl has had no money from her parents for a long time. Each year when she reaches school she comes to us and says she has no money but that she needs things and is willing to work for them. In such cases we encourage the girls and help them whenever possible.

Effort is made to make our girls more careful with their sewing supplies. They are taught that there is a place for everything and if some of their supplies are lost through carelessness and negligence these articles must be replaced by them at their own expense. This rule teaches the girls to be very considerate of supplies, and teaches them economy.

We try to impress upon our girls that correct behavior at all times is an index to their character and that this is especially true in good behavior at the table. We try to teach them always to conduct themselves at the table as though they were dining in the presence of a most honored host.

Some of the children who come under our care are very young and others are from homes where they have had practically no training in table etiquette. Therefore, we have to begin with very simple rules such as (1) Remain standing for the Blessing, (2) Saying "Excuse me" when leaving the table, (3) Never being noisy or unrefined at the table and (4) Saying "Thank you" or "No thank you" when food is offered.

Special attention is given to teaching the girls the use of table service. In this we find that the older girls are very helpful in that they set example for the younger ones.

Some of our children quite often receive boxes from home containing "goodies." We hesitate to say or do anything to take away from them this bit of happiness and pleasure; but these boxes cause a great deal of trouble. When it comes to eating good things, "a child is a child."

They lack the ability to stop eating when they should, and as a result, they are made ill. Many of these children are humored and spoiled at home. They are not trained to eat the kinds of food which develop them in the proper way.

Recently we served cole slaw at dinner. It was good, but was not touched by the children. The reason for serving it was explained. They were told that raw vegetables play an important part in their health. They were much interested in the explanation, and the next time slaw was served it was eaten by most of them.

This incident furnished the occasion for a talk later on the relation between food and health and pictures from a textbook helped make the subject more graphic.

In such talks the children are urged to eat more vegetables, fruit and good wholesome food, to drink more milk and to take fewer sweets. How the proper kinds of food and drink build the body is also explained, as well as how they stimulate ambition and give strength to study better. We have had children tell us that they did not know all this. They had never had the opportunity to find it out. They did not know

that milk was the most important food for children, nor did they know that water rids their bodies of impurities. We believe that more lectures of this kind should be given.

Housekeeping training is, of course, very important for girls. The care of their own rooms is the first step in this training. The girls are taught that keeping things in order not only saves time but gives the room a more attractive appearance.

Special attention is given in teaching the girls, (1) The proper care of their beds as to cleanliness and appearance, (2) care of the floor, (3) care of closets, and (4) the importance of an orderly, systematic care of their own personal property. By these simple rules, the girls are given training which will prove a great help in their own homes throughout life. The following Dormitory Chart is a device that may create an interest among the girls and prove to be an incentive.

Dormitory Report

Month of _____

	PTS.	Ida	Mary	Pansy
Bed making	10			
Floor of room	10			
Dusting	10			
Putting tools away	10			
Etc.				
TOTAL				

_____Inspector

The elements of home nursing should also receive attention. It is very important for the girls to know something about the simple drugs that are used in the average home. School is a good place to get some of this training. They need this training for their own protection as well as for the protection of others. They should know the simple rules of care for common ailments, such as colds. Learning to read a thermometer would be helpful. At the same time it should be remembered that there is considerable danger in attempting to administer drugs. They should know that most dangerous diseases frequently start in a simple way. The importance of sending for a doctor in case of illness is also stressed.

A final rule concerns politeness and respect. These traits of character should be constantly stressed, for they will mean much in helping our pupils to get on in life after leaving school.

Miscellaneous

I. S. F.

Industrial Efficiency of the Deaf.—Highly important information relating to the industrial efficiency of the deaf is contained in the March 1937 issue of *The Frat,* official organ of the National Fraternal Society of the Deaf. In an editorial on "Hazards?" Mr. Arthur L. Roberts, president of the Society, states that during the year 1936, the N.F.S.D. paid out a total of $22,780 in sickness and accident benefits, on claims sent in by 514 members thus disabled. Of that number, 386 were sickness claims on which a total of $16,050 was paid, and 128 were accident claims for a total of $6,730. Of the 128 accident claims, less than one fourth of all the claims, *only 22 could be attributed directly to accidents while employed at regular occupations,* that is, could be termed as so-called industrial accidents. None resulted in death or permanent disability.

The accidents had varying causes. Many of them occurred at home or elsewhere, and falls predominated. A number of the disabilities were caused by being struck by vehicles.

Later information received from Mr. Roberts summarizes the experience of the N.F.S.D. covering industrial accident claims by its members for the period 1932 to 1936, inclusive, in the following statement:

YEAR	Average No. of Insured Members During Year	No. of Industrial Accidents	Total No. Days of Disability	No. of Industrial Accidents Resulting in Death	No. of Industrial Accidents Resulting in Permanent Disability
1932	5,000	49	1,449	None	None
1933	5,000	29	805	None	None
1934	5,000	30	959	None	None
1935	5,000	14	574	None	None
1936	5,000	22	854	None	None
	25,000	144	4,641	None	None
Average 5 years	5,000	29	928	None	None

The above summary should make it perfectly clear that the deaf are not especially prone to accident. An average of 29 industrial accident claims over a five-year period for 5,000 members is convincing evidence of industrial efficiency so far as freedom from hazard is concerned. If anything, figures such as the above are proof of the alertness and stamina of the deaf in industrial occupations.

Resignation of Dr. Taylor.—Owing to the pressure of many other activities, Dr. Harris Taylor announces his resignation as president of the Convention of American Instructors of the Deaf. Dr. Ignatius Bjorlee, vice president, will assume the duties of the president. Dr. Taylor, however, remains active in Convention matters as chairman of the Program Committee for the forthcoming meeting of the organization in June.

In the period since his election to the position of president at the Jacksonville Meeting of the Convention in 1935, Dr. Taylor has given unstintedly of his time and energy in arousing a renewed interest on the part of the members, and he has spared no effort in the preparation of an unusually good program for the meeting to be held this year.

Certification.—An increasing number of schools have indicated their intention to adopt as formal policy the requirement of certification for members of their teaching staffs. Concerted effort in this direction will give substantial momentum to the plan of the Conference to promote higher standards in the work of schools for the deaf.

The following names, supplementing those previously published, bring the total number of those who have entered application for certification to 688.

Edward R. Abernathy, Ohio School
Maurine S. Allison, Maryland School
Sister M. Amabilis, Le Couteulx St. Mary's School
Effie Black Baxter, Illinois School
John Rinehart Blue, West Virginia School
Fanny Helen Wilson Bloomer, West Virginia School
Edna J. Bossi, Wisconsin School

Agnes S. Buckley, St. Joseph's School
Eugenia Burnet, Tennessee School
Duncan Angus Cameron, Wisconsin School
Margaret Thompson Carr, Tennessee School
Gordon Wilmer Clarke, Sr., American School
Wesley Olin Connor, New Mexico School
Sister M. Constantia, M.A., Le Couteulx St. Mary's School
Helen Marie Curtis, Kansas School
Louise A. Curtiss, Kansas School
Jennie Gray De Armond, Tennessee School
Rose Irene Dietrich, Michigan School
Margaret Hunter Dodd, West Virginia School for Colored
Agnes Doherty, St. Joseph's School
Sister M. Dositheus, M.A., Le Couteulx St. Mary's School
Alice Dowling, St. Joseph's School
Maurene Agnes Doyle, Baltimore Day-School
George H. Drake, West Virginia School
Evan Jones Ellis, West Virginia School
Crystal G. Foster, Rochester School
Catherine P. Geary, St. Joseph's School
Sister Rose Gertrude, M.A., Le Couteulx St. Mary's School
Nannie B. Golden, Alabama School
Edward McKee Goodwin, North Carolina School
Mary L. Gordon, Alabama School
Harvey Prindle Peet Grow, Kentucky School
Elizabeth Rebecca Hairfield, Tennessee School
Louise Sims Hammett, Alabama School
Anna Hoagland, West Virginia School
Marvel Claire Hobart, Wisconsin School
Gertrude D. Hooper, Kendall School
Sara G. Hudgin, Tennessee School
Alma Chadwick Jayne, American School
Gladys G. Jayne, Tennessee School
Mary Jane Jones, Kansas School
Olyn H. Judy, West Virginia School
Mary Elizabeth Kannapell, Kentucky School
Jeannette Keckeissen, St. Joseph's School
Paul C. Killelea, St. Joseph's School
Amelia D. Kuster, Nebraska School

Sister M. Laurentina, Le Couteulx St. Mary's School
Louise Wilson Lee, Territorial School, T.H.
Madison Johnson Lee, Kentucky School
Myrtle Hood Leonard, Alabama School
Mary Martin, Memphis Oral Day-School
Sister Mawra, Le Couteulx St. Mary's School
Grace W. McAlister, West Virginia School
Allison McCain, Indiana School
Martha McClary, Alabama School
Madeline McDowell, West Virginia School
Elsie Elizabeth McGee, Kansas School
Max Frederick Meyer, Miami School
Lottie J. Miles, Tennessee School
Hanna Miller, St. Joseph's School
Isabella M. Miller, West Virginia School
La Pearl Moore, Idaho School
Alberta B. Murray, Texas School
Thelma Delana Myers, Moline Day-School
Arthur Grove Norris, Nebraska School
Mabel Anne Northern, Kansas School
Josephine Nunnelley, Tennessee School
Bertha J. O'Brien, St. Joseph's School
Margaret Moss Parker, West Virginia School
Jean Winnifred Paterson, Saskatchewan School
Alvin E. Pope, New Jersey School
Carl Emmet Rankin, North Carolina School
Sister M. Regina, M.A., Le Couteulx St. Mary's School
Marvin Sidney Rood, Wisconsin School
Alice G. Rooney, St. Joseph's School
Grace Ross, Oakland Day-School
Mary I. Ross, Kansas School
John Peter Rybak, Le Couteulx St. Mary's School
Nelle Parker Scanlon, West Virginia School
Elsie Martha Seibert, West Virginia School
Rosalind Grace Shaw, Saskatchewan School
Ruth Stackpole, West Virginia School
John Lyman Steed, Oregon School
Kelly Haygood Stevens, Louisiana School
Elwood Anderson Stevenson, California School

Dorothy Rhodes Strieby, West Virginia School
La Verne Packard Taylor, American School
Minnie A. Thomason, Tennessee School
Helen Tinnin, Tennessee School
Erna Elizabeth Webb, Texas School
Beth Marcy Wetherbee, American School
Richard Wallace Williams, Wisconsin School
Mary Woolslayer, Kentucky School

Correction.—By an error, the item of information on "Proposed Federal Legislation in Aid of Education for the Physically Handicapped," as it appeared in the Miscellaneous section of the March ANNALS, page 195, was in part misplaced. The last paragraph on page 194 should have followed the matter given on page 195.

It should further be stated that Dr. Ignatius Bjorlee, a member of the Executive Committee of the Conference of Executives of American Schools for the Deaf, has been added to the Special Legislative Committee of organizations actively seeking enactment of the bill referred to in this item.

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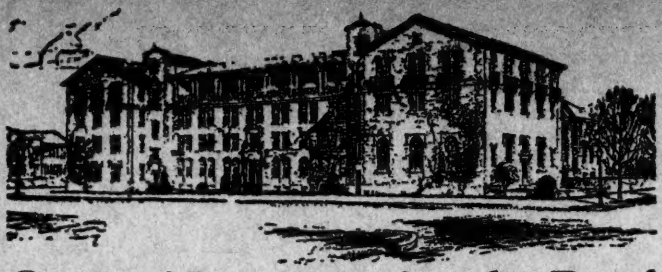

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